

\ RATS \ PLAGUE and \ RELIGION

John Spencer Carman, M. D.

Library of the Theological Seminary,
PRINCETON, N. J.

Purchased by the Hamill Missionary Fund.

BV 3265 .C345
Carman, John Spencer.
Rats, plague, and religion



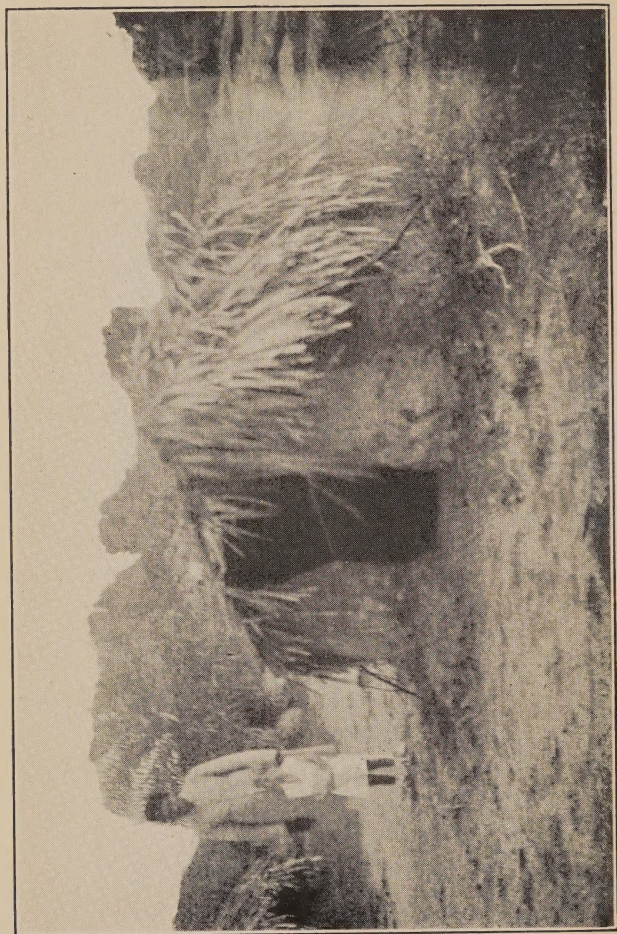
Shaded Area — A.B.F. Mission
x Hanumakonda.
← Ongole

RATS, PLAGUE, AND
RELIGION

JOHN S. CARMAN was born in Indianapolis, Indiana. His desire for missionary service received a strong impetus in a Christian and missionary home atmosphere. His father, a graduate of the University and the Seminary at Rochester, although ambitious to become a missionary, was unable to do so. As a pastor and as a superintendent of Sunday school work in several States that father's contribution was significant.

In Spartanburg, South Carolina, John S. Carman attended Wofford College. At the Des Moines Student Volunteer Convention in 1920 he decided for foreign mission service. The helpful influences of the Lake Avenue Baptist Church, Rochester—of which he was a member—and of its pastors, Dr. A. W. Beaven and Dr. S. W. Beaven, and of the medical mission class conducted by Mrs. S. W. Beaven, contributed much to his decision to prepare as a medical missionary.

Doctor Carman graduated at the Cornell University Medical College, in 1926, and took his internship with the Methodist Episcopal Hospital, Brooklyn, New York. His appointment as a representative of the American Baptist Foreign Mission Society, to South India, came November 15, 1927. He and his wife sailed for India in September, 1928. Arriving on the field they were designated to Ramapatnam for language study. In December, 1929, they went to the Clough Memorial Hospital, Ongole. In September, 1930, they were redesignated to Hanumakonda, where Doctor Carman took over the work of Dr. C. R. Manley. The Carmans arrived in New York on furlough in September, 1934. In January, 1936, they sailed for India for another term of service.



A Plagne Hut—Mud Walls and Thatch Roof
(See page 54.)

LIBRARY OF THE
DEC 18 1936
THE JUDSON PRESS

RATS, PLAGUE, AND RELIGION

STORIES OF
MEDICAL MISSION WORK IN INDIA

By JOHN SPENCER CARMAN, M. D.

Victoria Memorial Mission Hospital
Hanumakonda, Hyderabad State, India

PHILADELPHIA

THE JUDSON PRESS

BOSTON
KANSAS CITY

CHICAGO
SEATTLE

LOS ANGELES
TORONTO

Copyright, 1936, by
THE JUDSON PRESS

Published July, 1936

PRINTED IN U. S. A.

DEDICATED
To the Memory of

VENGKARTI

a little Indian boy who died of bubonic plague. He came to be cured, but served only as a letter of notification. He died, but hundreds in his village were saved from a similar fate;

DOCTOR LEWIN

a civil surgeon, who served faithfully at the bedside of many plague patients. He directed many campaigns against its spread, but at last, while unprotected himself, fell a victim to its virulence;

BABY JEANNETTE

inoculated against plague because of possible exposure. She escaped that, but succumbed to another epidemic scourge;

JOHANNAMMA

who wanted to be a nurse. It was not the "black death" that carried off this devoted and humble follower of the Master, but what is often called the "great white plague";

And all the noble company of those who have thought and wrought, suffered and prayed, that these plagues "might be stayed in the land." Many more are now so engaged. To all of these, of whatever race or creed, this book is dedicated.

"Thanks Be to God, Who Giveth Us the
Victory."

CONTENTS

CHAPTER	PAGE
INTRODUCTION	1
I. RATS, PLAGUE, AND RELIGION	11
1. A RAT FELL IN THEIR HOUSE	13
2. A PLAGUE CAMPAIGN	32
3. A HUMAN LETTER OF NOTIFICATION	43
4. AFTER PLAGUE, FIRE	62
II. "THE PESTILENCE THAT WALKETH".	75
ONE DIED; HUNDREDS LIVE	77
III. "NEW OCCASIONS TEACH NEW DUTIES"	89
1. "OH, I GO FAR AWAY!"	91
2. SOME LEFT-OVER CURRY	121
3. UNWELCOME VISITORS	133
IV. THE GREAT "WHITE" PLAGUES.....	139
1. SHE WANTED TO BE A NURSE	141
2. CANDIDATES FOR THE PROFESSION OF BEG- GING	157

Contents

CHAPTER	PAGE
V. MOTHERS AND BABIES	163
1. STIFF NECK, A RUBBER TUBE, AND A HUNDRED RUPEES	165
2. TWENTY MILES IN AN OX-CART	171
3. "AYYO, ANOTHER GIRL"	176
4. A CAKE OF SOAP AND A PAIR OF SCISSORS..	179
VI. THERE WERE MANY SICK OF DIVERS DISEASES	199
1. WHICH KIND OF SODA?	201
2. A "TABLE" ON THE STOMACH	205
3. OINTMENT OR RADIUM	208
4. A MAN CAME WALKING	213
5. STONES, MILK, AND FISH-OIL	217
6. LED BY A ROPE	223
7. RED PAIN	228
8. THE WIDOW'S MITE	236

LIST OF ILLUSTRATIONS

	OPPOSITE PAGE
<i>A Plague Hut—Mud Walls and Thatch Roof</i> (Frontispiece)	
<i>Dr. and Mrs. John S. Carman</i>	10
<i>A Tonga in a Bazaar Street</i>	26
<i>Vaccinating Team from the Hospital at Work in a Village</i>	82
<i>While the Vaccine Dries on Their Arms a Group of the Outcaste Children Pose for a Picture</i>	86
<i>The Water-Supply System for the Hospital</i>	116
<i>One of the Hospital Bathrooms</i>	120
<i>Johannamma, Who Wanted to Be a Nurse</i>	142
<i>Men's Ward, Hanumakonda Hospital</i>	158
<i>Two Lepers</i>	160
<i>An Old Christian Preacher</i>	180

INTRODUCTION

Death lurking just around the corner! Coming perhaps on the back of a rat, or lying hidden in the very food the people eat, or in the water they drink! People unaware of the cause of the pestilences that destroy them, some running from them in fear, others awaiting their outcome in fatalistic hopelessness! People ignorant also of the perils of the more insidious and less swiftly moving plagues, letting lepers mingle freely in bazaar and street, letting their youth spray their homes with disease germs as they cough out their lives with tuberculosis, letting eye-flies torment their children into sore eyes and blindness!

These are but a part of the life of India—a very needy part. The stories presented here are an attempt to portray something of that great need. They are true to the facts of the author's observation and experiences as a medical missionary in South India over a period of six years. Many of them are simply the recording of actual occurrences which he has seen or heard, or in which he has taken part. The writing of the book, however, has grown out of a later experi-

Introduction

ence, the furlough period in America, when the task of presenting a picture of medical work abroad called for consideration of the most interesting and effective methods. Our choice was the story form. Many of our friends have heard us tell these stories, and have suggested that they be presented in a book, with the hope that many more will read them and from them gain a more vivid picture and a more intelligent interest in medical missionary work in India.

By its very nature our book is limited in scope. A comprehensive study of India's public-health needs would have to include a discussion of many problems that have been omitted. Malaria, for example, is the cause of much suffering and many deaths each year. But there are already several books dealing with this subject, and a number of special surveys have been conducted, the reports of which are available. Furthermore, a concentration of attention upon this one disease has sometimes caused uncritical observers to be misled by the common misconception that fever, especially fever with chills, is synonymous with malaria. This results not only in confused statistics, but also in diverting attention from the very fundamental need for preventive sanitation and for early diagnosis in the treat-

Introduction

ment of such other diseases as typhoid, which also start with chills and fever and are more often fatal than malaria.

Moreover, in dealing with some of the great enemies of public health in that country, this book cannot give anything like a complete picture of India. We wish it could, that we might help to avoid the hasty conclusions that are all too easily drawn. Sweeping generalizations about the character of a whole people are not justified on the basis of brief and partial pictures, even though the pictures, as far as they go, are true and deeply moving. If the people of India were all degenerates, as some touring scribes would have us believe, where would hope lie? With such sweeping conclusions we cannot agree. It is our high privilege to share in a sincere admiration for many things Indian, past and present, and in the bright hope for a greater India in the future. How can we blame the more unfortunate citizens of a country for not applying and enjoying the benefits of knowledge which we have but imperfectly and incompletely shared with them, while yet we have been enjoying the fruits of their toil and labor and of our exploitation of their physical resources?

There is so much that is beautiful and noble in

Introduction

India and her people that we never grow tired of telling of them, and of reminding our friends in America of what she has produced and shared with the rest of the world in language and culture, and in material things as well. Gold, gems, spices, and many other products, including the tea-leaves from which was made the beverage often served to us as we talked.

India has become a real home to us. Are not our true friends those who share with us life's great experiences? Our Indian friends have indeed shared with us joy and sorrow, aspiration and disappointment. They have worked together with us for health and for life, and we have stood together, stricken, when loved ones, theirs and ours, have passed away. So, while we are Americans, and proud of our rich heritage, still in a very real sense the land of our Indian friends has become our land too, and their people our people. Yes, even their plagues have become our plagues. Therefore we are eager to join with them in the eradication of all these things that are destructive of life and health.

Occasionally our tale of the great epidemics which annually take their toll of thousands in India meets a strange response. Some are sympathetic, but take what seems to them a broader

Introduction

view of the problem. They say: "India has an enormous population, three times that of the United States, and the area of that country is but half that of ours. The majority of the people are extremely poor and the birth-rate is high. Are you doing a service to them by trying to remove those pestilences which, with war, are the chief factors that control increase in population? If you succeed in eliminating plague, cholera, typhoid, and all the rest, will not the congestion of population increase that much more rapidly, making the poor people even poorer?"

Some prominent writers have not only raised this question, but have indicated their belief that the answer to it is self-evident. Others, while hesitating to express a view which savors of inhumanity and the "law of the jungle," have nevertheless lost interest in the support of curative and preventive measures for India and other countries where poverty and overcrowding exist. On the other hand, even if we were convinced that curing and preventing disease would necessitate greater efforts to provide economic opportunity for the poor, in the meantime we should still want to try to save them from dying so

Introduction

horribly. If population must be limited, let it be by other means.

The important thing about this query, however, is that the obvious answer is not the correct one. History has proved that right here in the United States. Improved public health and decreased infant and adult mortality have been followed by betterment of the economic status of the poor and by general reduction in the birth-rate. Other factors have also been at work, but better health conditions have undoubtedly contributed largely to these changes.

Thus it appears that improvement in public health has been a very potent force in aiding, rather than in interfering with, population control. Reduction in mortality, especially among infants and children, has had a much more lasting and wide-spread effect than has any birth-control campaign or the introduction of new devices. These facts were well brought out by one of the leading American authorities in the public-health field, Dr. Haven Emerson, in addressing a group of medical missionaries a few months ago. He compared the dozen children born in the average family in the United States a hundred years ago, and the third of that number born in the average family today. But out of

Introduction

the dozen born a century ago, only three or four grew up, while now at least three out of every four grow to maturity. Apparently reduction of the death-rate has operated here to reduce the birth-rate as well. Is it erroneous to conclude that in other countries, except those in which stimulation of population is desired for military or political reasons, a similar result will occur when infant mortality has been reduced to a similar extent?

At that same meeting Doctor Emerson went on to say that in attempting to bring the benefits of improved public health to other countries we would do well to consider further the history of that work in this country in order that we might place the major emphasis on the most fundamental problems first, and then work up. His classification, in order of historical development, is very helpful in our study of medical mission work and in planning for its future. It also serves to strengthen our hope that what has been accomplished here may also be brought about in India and in other countries.

1. "Lifting people up out of their own filth";
i. e., sanitation. This involves the elimination

Introduction

of the plagues carried by vermin, as well as of the intestinal diseases.

2. Research in nutrition, and application of that knowledge.

3. Prevention and cure of tuberculosis, syphilis, and malaria.

4. Control and restriction of the dietary drugs—alcohol and opiates.

In telling of these diseases which are such a menace to life and health in India, it has been necessary to describe something of the customs and also a little of the religious beliefs and practices of the people. Some of these seem to be related to the difficulties which are involved in the eradication of the plagues. It will readily be seen that many of the ways of life of the people of India are very different from our own. But that in itself does not condemn them. We tell of them not with any desire to arouse amusement or ridicule, nor to excite that kind of lofty pity which tosses a coin and then walks away. We hope that the telling of these stories will lead to understanding, and that from a better understanding will arise a greater desire to share with the people of India and of the world the valuable things which we possess in the realms of knowl-

Introduction

edge, health and religion. Most of these values we have received through no effort of our own. They have come to us through the labors of others. Our Master said, "Freely ye have received, freely give," and also, "I was an hungered, and ye gave me meat; I was thirsty, and ye gave me drink; I was sick and ye visited me. Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto me."

Such sharing of our blessings is costly. It was costly to those others in the past from and through whom these values have come to us. To pass them on to others will be costly to us also. But "No sacrifice is too big, when you're face to face with human suffering."

"Of making many books there is no end." In the making of this one the end could not have been reached had it not been for a great deal of assistance, which the author takes pleasure in acknowledging. When only a few stories had been written, encouragement came from my friends, Dr. Paul Judson Morris, of Burlington, Vermont, and Mrs. Bert Ashbrook, of Granville, Ohio. In the whole task inspiration and valuable suggestions have been given by my wife, who has even written some of the stories herself—and has also saved the reader from some others

Introduction

which her husband had written but later agreed to eliminate. My father-in-law, Robert Chipman Hull, has aided in the labor of editing the book and preparing the manuscript for the printer.

The whole cooperative enterprise would probably never have become a finished and published book had it not been for the sympathetic cooperation, helpful suggestions, and stimulating encouragement of Dr. William A. Hill and Miss May Huston, of the Board of Education of the Northern Baptist Convention. They have kindly assumed the task of proof-reading and final editing, since the author and his family, before the date of publication, expect to be well on the way back to India.

JOHN S. CARMAN, M. D.

ROCHESTER, NEW YORK,
DECEMBER 31, 1935.



Dr. and Mrs. John S. Carman

I

RATS, PLAGUE, AND RELIGION

RATS, PLAGUE, AND RELIGION

1. A RAT FELL IN THEIR HOUSE

Nar-sai-ya was happy as he walked through the winding streets of the village and finally came to the house of his own family. His father had died of smallpox just a year ago, and his mother had died in childbirth five years before, but it still seemed like home, for were not the mud walls and the carved figures on the old wooden door just the same? And his two brothers still lived there, and carried on the work on their farmlands, while the wife of the older one kept the house. This indeed was his “own-house”—Telugu equivalent for our “old home place”—and he was glad to have escaped to it from the deadly presence of that thing which was causing the death of so many in the big city where he worked. This terror had seemed to be spreading to his part of Hyderabad; many people had run away to the fields and camps; and again there began that talk of rat-falls. People were saying that it was a bad omen to have a rat die in your

Rats, Plague, and Religion

house, that some of the family were sure to die soon after.

Last year he, too, had gone to a plague camp, but somehow the thing seemed to have followed them out there, so they had to flee somewhere else. Fortunately for him, he thought, he had been called away home last year, away from it all, even if the call had been to see his sick father. That had given him an idea for this year. For it had been a long and tiresome walk from the plague-camp to the bazaar where he worked—in every morning and out again every night. It was supposed to be safe to stay in the city during the daytime—the dread presence lurked only at night, they said. But hadn't that big merchant up the street fallen a victim? At least he had had fever and was sick only a few days.

So Narsaiya was glad to be home; to tell them how cleverly he had arranged a little extra vacation, in addition to escaping that awful thing—plague.

His brothers, Chan-drai-ya and Veng-kai-ya, greeted him warmly with the usual salutations, and Lak-shmi also came in to hear why Narsaiya should have come from the big city to see them at this time.

“Oh, I was homesick,” he said at first; but

Rats, Plague, and Religion

then he related all the particulars, how he had told his employer that his uncle was very ill, had a high fever, and might not live. Finally, he had to come home for the celebration of the first anniversary of his father's death.

"But that does not come until four days after the next full moon," said Lakshmi.

"Very true," replied Narsaiya, "that is how I arranged for a *month's* leave. And perhaps when I get back to the city the plague will have gone and I won't have to take that trip every day from the little huts out in the fields, back and forth to the bazaar."

They had a pleasant evening together—Lakshmi made good curry. The next day the three brothers worked side by side in the fields—their common inheritance — where the rice-plants, which had been thinned out just a week before, were growing well. The rice looked cool and green, especially when they could sit and look at it as they rested under the shade of the large banyan-tree beside the road. They took turns driving the oxen at the well, for this was the main part of their work then—keeping a little water standing around the growing plants. Each time the oxen went down the incline at the side of the well the rope which they pulled would raise the

Rats, Plague, and Religion

leather bucket and dump it into the trench which distributed the water to the various little patches of ground. There little mud walls, separating the patches one from another, kept the water in.

When they had finished their evening meal that night the family all sat down and listened for a while to the stories which Narsaiya told them of the wonderful things that happened in the big city—the parades, the fine music, the fireworks—when the Nizam had been entertaining the viceroy—the big motor-cars, the wide streets, and all the rest. The others found it hard to believe some of the stories, for they had never seen such wonders in their village, or in the village where Lakshmi had lived as a girl.

Then they asked Lakshmi to sing for them—some of the old familiar songs of the Indian classics. She accompanied herself on a little instrument with two strings.

As befitted the oldest brother, Chandraiya sat in the one chair, while both Narsaiya and Vengkaiya sat on the bed. As the song came to a part which he especially liked, Narsaiya moved down to sit on the floor opposite Lakshmi, leaning against one of the posts that supported the roof at the edge of the verandah portion of the room. Vengkaiya stretched out on the bed, for he had

Rats, Plague, and Religion

done a major share of the work in the fields that day while the older brothers had been talking over the gossip of the village.

Everything at first was quiet, except for the music and an occasional sound from the cattle in the other room. But presently there was a scurrying noise up on the roof, then under the roof, and on some of the roof-beams. The family paid no attention to this, for what house in India does not have rats? There is always some box, or bag, or earthenware jar of rice or some other grain, that invites the rats to stay and become, as it were, a part of the household. They weren't even particularly disturbed when a good-sized rat fell from one of the beams and landed on Vengkaiya's leg. Vengkaiya drew up his leg and looked down, expecting to see the rat jump off the bed and run across the room.

Now for some reason the rat didn't stir, and when Vengkaiya moved his foot the rat fell over on the bed. Vengkaiya sat up. This was unusual. He had never seen anything like it before. He was on the point of reaching over to brush the rat off the bed, when Narsaiya sprang up and cried, "Don't touch it—get away from it!" Vengkaiya got to his feet and the rest all gathered around and peered at the rat, which seemed

Rats, Plague, and Religion

to be dead. Then Narsaiya explained the reason for his sudden fear.

“ I never saw a rat fall dead like that either,” he said, “ but they say up in Hyderabad that a rat which falls dead in the house means plague, and that soon after the rats begin to die the people begin to die. Of course, we haven’t had anything like that here. This is the reason I came home when the plague began again in the city this year, but I don’t think we had better take any chances. You all just stay away from that rat while I go over to Nuk-ka-la-guntha and get the doctor of the dispensary there, and ask him about it. It is only three miles to go.”

While he was gone the rest stayed away from the rat, except Vengkaiya, who was a little skeptical about all this new business, and didn’t see any harm in brushing the rat off his bed. He was tired and wanted to sleep. What did a doctor know about rats? He had sent a little boy over to this doctor once, when he had a big swelling on his arm and wanted some ointment for it. He had chosen one particular boy because the lad had a little swelling—a boil—and he had heard that some of these doctors were unwilling to send medicine for people they had never seen. So he told the boy to get a week’s supply of medicine

Rats, Plague, and Religion

for himself and they would both use it. Vengkaiya had had a terrible time with that lump of his. It got worse instead of better with that medicine. Still, the medicine seemed to help the little boy's swelling. Strange that it had not helped his.

Finally the doctor came, and Narsaiya, being the one of the family who had been to the city, answered his questions while the rest grouped themselves about him. The doctor took a look at the rat; asked them how it had fallen, and from where. (It was on the floor now, but no one let on that it had been on the bed.) The doctor directed his servant to pour some kerosene on the rat to smother the fleas, then to take it outside and burn it. He said to Narsaiya and the rest: "You must all get out of this house right away, for it is now some time since the rat fell, and the fleas may be anywhere around here. And you must all take the preventive inoculation—see, I have brought it along."

They had been standing fairly close to the doctor while he had been talking, but now, when he took the syringe out of his case, they drew back. Narsaiya was a little bolder than the rest, so he asked: "What was the matter with the rat? Was that the sort of rat-fall they were

Rats, Plague, and Religion

talking about in the city? What is all this that you have been telling us? Does it mean—plague?”

The doctor explained it all again, that this was a rat-fall, and that a rat-fall means the plague, bubonic plague, and that if you get the plague you are almost certain to die. Plague is fatal about eight times out of ten, no matter what treatment the patient receives. The doctor told them that if they wanted to escape the disease they should leave their home and go and build a hut in the fields. He said that they should go tonight, right away, and not come back until the house had been thoroughly treated to make sure that all the fleas had been destroyed. The brothers all objected to leaving the house, especially at night. It wasn't lucky to start away from home in the night-time. "And anyway," asked Chandraiya, "if the dangerous thing was the rat, hasn't the honorable doctor's servant taken that out, so why should we leave the house of our father in the dead of night?" The doctor repeated that the danger was from the fleas; but somehow he could not make them grasp the seriousness of their position.

Only Narsaiya was a little skeptical of his brother's argument and started over to the doc-

Rats, Plague, and Religion

tor to ask a little more about it. Again the doctor tried hard to explain why they should leave, telling the whole story again—how it is the rat-fleas that carry the germs of the disease, and that as soon as the rat dies—of plague—the fleas jump to the nearest rat or man so they can continue getting blood, which is their source of food. Then the second rat, or man, becomes infected from the flea-bites, and in two or three days comes down with plague, and in three or four days more very likely dies. Then, a bit discouraged at the little impression his words made, he said:

“Well, if you won’t leave the house tonight, by all means do so tomorrow.”

“Oh, yes, we can see about that tomorrow, after we have talked it over with some of the elders of the village,” broke in Chandraiya, glad of this suggestion for putting off the matter of deciding.

The doctor went on: “But if you won’t leave the house tonight, you certainly must take this injection, which will protect you against plague, even if you should get a bite from one of the infected fleas.”

There was no response. These villagers did not understand the word “injection.” Narsaiya,

Rats, Plague, and Religion

however, remembered; he had heard of someone taking injections at the hospital in Hyderabad; so he went back up to the doctor to ask, "What do you mean—injection?" The doctor had laid the syringe down while he had been talking, but now he took it up to show Narsaiya what the medicine inside it was, and how it was to be given. But the sight of that big syringe and needle was enough for even the young man from the city. Frightened, he joined the rest of the family in refusing, even though the doctor went on to explain that he had taken the injection himself, and had given it to his family. He told them it would cause a little soreness in the arm, but that it would protect against plague. The idea of the sore arm stuck, and Lakshmi immediately changed the subject by asking how she could cook the food for her husband and the rest; Vengkaiya asked how he could do the work in the field; in fact, they all objected so strongly that the doctor finally left in discouragement, telling them that they were taking a very big chance, and that now the responsibility was theirs.

A rat had died. The rat had been removed, so what else was there to worry about? Such funny ideas these people had who had gone away

Rats, Plague, and Religion

to school, and who had learned to talk like Brahmans. They didn't talk just like the Brahmans of the village, to be sure, these educated youngsters; the doctors, especially, used new and big words and talked about germs or something like that. Germs, they said, even if you can't see them, make you sick, or even make you die.

The family went off to bed and slept well. They considered the matter finished, though Lakshmi did wonder a bit while she was in the house alone the next day and the men were in the fields, so she put a little extra ghee and a little nicer cake as an offering before the god when she went to the temple for her morning devotions.

When the men came home from the fields that night, and had finished their supper, they went down to the center of the village. There, of an evening, the older men congregated to discuss village affairs, to complain together of how heavy the taxes were these days, and to take up matters of village discipline. They welcomed Narsaiya back. He had been rather too young to talk in this group before, but since he had been in the city he could tell them new and strange things. It was only after he had answered many questions that he had a chance to tell them about the rat that had fallen dead and all the queer things

Rats, Plague, and Religion

the young doctor had said when he came to their house the night before.

One of the old men, who was a little deaf but had caught the mention of a rat, broke in to recount the classical Fable of the Rat, so familiar to them all. When he had finished they had forgotten a little about the dead rat and what the doctor had said, but they agreed that the doctor must just have been trying to scare them with some of his new-fangled ideas. What did a flea amount to, anyway?

Ten years before, when plague had come, there had been no doctor near the town; so when a number had died, after a few days of high fever and painful swellings, they hadn't known what the disease was.

At last they all went home and to bed. That day there had been two other rat-falls in houses near the home of the three brothers, but in these houses there had been no young men from the city to be alarmed by the peculiar behavior of rats, and the women had not even thought to mention it when their husbands had come in from the fields.

Life went on as usual for a couple of days, and Narsaiya was enjoying himself very much. How much pleasanter this was, in his own house, and

Rats, Plague, and Religion

in the fields, than off there away in the crowded streets of Hyderabad!

Then came the morning when he was awakened early by the sound of groaning, and he looked over to see his younger brother, Vengkaiya, writhing on the bed. Going over to him quickly, he asked what was the matter.

“ Oh, I have a terrible pain, and there is a little lump here,” and Vengkaiya showed his brother a small swelling in his left groin. As Narsaiya touched him he found his skin very hot. He aroused the rest of the family, and they all asked the sick boy when he began to notice it. “ Just a little while ago it started, and it woke me up. Oh, go and get something from the doctor to put on my leg, to stop this awful pain!”

“ You go,” said Chandraiya and Lakshmi together, “ you can talk so much better than we.” So Narsaiya hurried off to the doctor’s house. While he ran his thoughts ran along too—“ fever and painful swelling, swelling, pain, fever”—where had he heard that before? What was this disease that had so suddenly attacked his brother?

He was thoroughly upset—there was something he couldn’t quite remember about someone in the city who had had those same symptoms.

Rats, Plague, and Religion

Rather out of breath, he arrived at the doctor's house.

"My brother is very sick. He has a terrible pain. Won't you please give me something quickly, so I can run back and give it to him to stop the pain?"

The doctor asked Narsaiya a few questions and learned the important facts—sudden onset, fever, painful swelling in the groin, prostration. As he listened to Narsaiya he kept trying to recall where he had seen this man before. Suddenly it came to him. "Wasn't it to your house I came the other night, to see the rat that had fallen dead?"

"Yes, but we haven't seen any more rats——"

"*Ayyo!* I was afraid that this would happen, so I have procured a fresh supply of vaccine from the city," said the doctor. Turning quickly, he called his servant to get his bag. "Go and ask Shri Ra-mu-lu for his tonga,¹" he directed Narsaiya. "Hitch up the horse quickly, and bring it here."

"But, doctor"—Narsaiya was a bit bewildered and didn't understand why the doctor wanted the tonga—"please give me something to take back with me for my brother before you go away.

¹ Two-wheeled, horse-drawn carriage.



A Tonga in a Bazaar Street

Rats, Plague, and Religion

His pain is really very bad, and I must hurry back to him." He was quite sure that the doctor had not yet had his morning coffee, and yet here he was wanting Narsaiya to go and borrow a tonga for him before he gave him any medicine for poor Vengkaiya.

"Hurry and get the tonga. I am coming back with you to see your brother." That seemed to make it all right, and Narsaiya ran to Shri Ramulu's house. The latter was having his early morning meal. When he finally came out of course he had to hear all the story of the sudden onset of fever and the rest of Vengkaiya's symptoms. But the tonga—why the tonga? Oh, yes, to take the doctor over to see Vengkaiya. "But why does the doctor want to go over so early in the morning? Can't he give you some medicine for the pain, and go over later, if necessary?" asked the old merchant.

Narsaiya had no answer. He had wondered about this himself. But he knew something had to be done in a hurry, and he told Shri Ramulu that his brother's pain was so bad that he was crying and groaning with it. At last the old merchant told his servant to bring out the little carriage quickly and drive it over for the doctor.

The doctor didn't say much on the way to Nar-

Rats, Plague, and Religion

saiya's village. He wanted to see the patient before definitely committing himself. Yet it did sound so typical! The rat-fall, the time interval—three, or was it four days?—and now the sudden onset, the characteristic symptoms, fever, and bubo. If this was really the plague, what could he do to prevent its spread, and how could he get help in case an epidemic developed?

Narsaiya, too, was thinking. Was it that he had come home on an unlucky day? He had been in such a hurry to get away from the city that he hadn't consulted a priest about it, or even that young Brahman on the train. Wasn't Thursday afternoon usually a good time? *Ayyo!* Last year he had come home to find his father sick! And then he had died! And now poor Vengkaiya! But his case didn't seem so serious—the swelling was not very big. Why should the doctor be coming himself? Didn't he usually make his calls at the homes after the morning dispensary? He hadn't even stopped to take his coffee—his servant had reminded him of it as they left.

“Can't you make that old horse go any faster?” the doctor asked the driver.

Chandraiya was waiting anxiously outside the house, and as they went in they could hear poor

Rats, Plague, and Religion

Vengkaiya's groans. Salaams were said briefly, and the doctor went over to the side of the bed. The others crowded around, but he motioned for them to stay back. He asked the sick young man a few questions, felt his pulse, and at the same time estimated his temperature. Then he looked at the swelling in the groin. Vengkaiya jumped when he touched it.

The doctor turned to the rest. "This is plague. You must all take the injection, right now, or you will get plague. Why didn't you let me give it to you when I was here before? Why didn't you leave this house?"

He opened his bag, and while he was sterilizing the syringe and needles explained: "Some of the fleas must have jumped off that rat and up on to Vengkaiya's bed before I got here and put kerosene on the rat. I feared they might have done that. That is why I told you all to take the injection and to leave the house."

Now Narsaiya realized the situation, and he was the first to come forward and at the doctor's direction roll up his sleeve for the injection. "All right, doctor," he said, "we'll do what you tell us." But as the doctor drew the fluid into his syringe and prepared to give Narsaiya the bacterial vaccine the latter turned: "But, doctor,

Rats, Plague, and Religion

why don't you give it to Vengkaiya first? Don't you hear him crying with the pain? Listen to him, he's mumbling something to himself."

"It is too late to give it to *him* now. This medicine doesn't cure plague. It only prevents it. And the rest of you must take it quickly. Perhaps you have already been bitten by infected fleas, and the vaccine cannot be fully effective if it is given too long after the bite. Why couldn't all four of you have taken it the other night?"

There was no longer any hesitation, and Narsaiya, followed by Chandraiya and Lakshmi, received an injection. Narsaiya looked at his arm for a minute. He had been afraid of plague. Oh, yes, he had run away from the city because of that fear. But he had also been afraid of the big syringe and needle. Still, it hadn't hurt so very much—only a little tingling while the fluid went in and a little burning now. "Doctor," he said, and rolled up his right sleeve, "give me some more in this arm too. That didn't hurt. And you say those little black things that jump may have bitten me already. Could they bite without my feeling it?"

"Yes," replied the doctor, "if they bit while you were asleep, or even while you were awake, you might not have noticed the bite. But it is no

Rats, Plague, and Religion

use to give you more vaccine now. I have given you enough to protect you for six months; to give you more now would not be wise. If, six months from now, you are living where there is plague, you must take another inoculation. But now hurry up and move out of here, and build yourselves a little hut in the fields, somewhere outside the village. Later I will send a man to spray this house to kill the fleas."

"But, doctor," said Lakshmi, "what about poor Vengkaiya? Aren't you going to give him some medicine to make him well and to stop his pain? Surely you don't expect us all to go away and leave him here alone?"

The doctor called them a little farther away. "Yes, I'll give him what medicine I can. But I told you the other night that seventy-five or eighty-five out of every one hundred who get plague die—despite all we can do. We shall have to find some place where we can isolate him, well away from the village, and not near the plague-huts. One of you can stay with him, but the other two of you, come along! We must tell the rest of the people on this street about this, and get them to move out too, before there are any more rat-falls, or more people stricken."

Lakshmi had already gone over by the bed.

Rats, Plague, and Religion

She had elected to stay, so the doctor told her what to do, and gave her some medicine to give Vengkaiya. Then he took the other two and went out to the street. As they came out the door an old woman stopped the doctor. Narsaiya recognized her as the wife of the man who had told the fable about the rat.

“Won’t you come to our house, doctor?” she asked; “our house is just down there. My husband has such a high fever. And he says that he has pain and a lump under his arm.”

2. A PLAGUE CAMPAIGN

The story of Narsaiya is based on a little dramatic sketch,² which we used for our plague campaigns in and around Ha-nu-ma-konda. This was the idea of Dr. Hari Gopal, one of the young assistant surgeons of the Government medical staff, who had been assigned to the plague work. A Hindu, he knew the appeal of drama for an Indian audience. He was assisted in the preparation and presentation by some of our male nurses and other helpers at the mission hospital.

² This sketch has been modified somewhat from the original by the addition of certain details that may help the reader to understand the situation better. These things would be taken for granted by an Indian audience and so were omitted in the dramatization, and because they would have added to the technical difficulty of presenting the dramatization on an improvised street “stage.”

Rats, Plague, and Religion

A space large enough to represent the inside of a village house could usually be found in a wide part of the street, in the town or village, or under a tree a little distance from the road. Sometimes the only "properties" were a bed and a chair, a few cooking utensils, and some torn paper to represent scraps of food left around in an untidy house. The scene would open with rats scampering about the room. Rubber toys pulled at the end of long strings looked quite realistic, for they could be made to scurry around among the dishes and over the bed and chair; later they could be made to squeak. This attracted the children, as well as some of the adults.

Most of the people in the various parts of the town and in the villages understood Telugu, the main language of our region; but for those who knew only Urdu, the official language of Hyderabad State, we had an able interpreter for the play and for the rest of the program in the person of the young Mohammedan sanitary inspector of the Government staff.

The drama was only a part of the campaign which we waged against plague. An idea of some of the rest of the things that had to be done can be gained from a letter which I wrote during

Rats, Plague, and Religion

the epidemic in Hanumakonda and vicinity in 1933:

“AUGUST 24.

“When I studied about plague in medical college, it seemed very far away. Now, however, I am coming to know it at close range, for we have bubonic plague right here in Hanumakonda. There had been none for about seven or eight years, but last October a case was brought here from Hyderabad City, where they have it every year—usually only during the cooler months, from about October to February. There is no adequate system of quarantine to keep infected and stricken people from traveling about. From this case, just referred to, the rats began to be infected. Soon there were rat-falls.

“This infection of the rats spread over different parts of Hanumakonda. Fortunately, very few human cases developed. But we could tell that the ‘black death’ was still within the town, for every week or so until May, a new case, usually fatal, and more rat-falls would be reported from some one of the bazaars or residence districts. However, because there were not more deaths the people did not pay much attention to it, and very few of them left their houses or took

Rats, Plague, and Religion

the preventive inoculations. Contrary to the usual expectation, the incidents of new cases and rat-falls did not diminish as soon as the hotter weather commenced. Hence some of us wondered if there wouldn't develop an epidemic of some size after the hot season.

"And our fears have been realized. Beginning in July, there were new cases, one or two a day, and then a free interval of about a week. Now there is scarcely a day without a new case. This time the people have become more worried, and as the plague has been spreading from one section of the town to another, a larger number of people are moving outside of town to live in shacks and huts in the 'plague camps.' Up to date, about six thousand people out of a population of about eighteen thousand have been inoculated. Of this number, we have done about fourteen hundred, the civil medical staff and the private practitioners in this vicinity have done the rest.

"It took a great deal of agitation and a number of deaths in all parts of the town, but finally enough public opinion was mustered to make it possible for the civil surgeon and those associated with him to carry on a campaign so suc-

Rats, Plague, and Religion

cessfully that the epidemic has not assumed alarming proportions.

“ But the plague isn’t over yet—far from it. A few cases are reported from the near-by town of Mat-wa-da, which has a population of about fifty thousand. Preventive work there is much harder than in Hanumakonda where there is a relatively large number of educated people. In Matwada, the control of the epidemic is going to be very difficult, for the condition of the houses is much worse; there are more rats, and the ignorance and superstition of the people are much greater.

“ Come with us for one of our evening ‘ plague programs.’ We go out almost every night now. The ‘ tom-tom ’ drum and some coolies carrying boards covered with posters, ‘ sandwich-man ’ style, have already been sent around by the civil surgeon in some plague-stricken part of the town. At about six, we go to a convenient street there. We start with a little drama.³ After this an offer of inoculations brings the crowd up, first with hesitation, then in flocks like sheep. Some of the civil surgeon’s staff and my assistant, Doctor Jee-va-nan-dam, stay at this place and give inoculations, while a couple of women nurses ac-

³ The story of Narsaiya.

Rats, Plague, and Religion

company me around into the houses, especially those where there are 'purdah' women. These women are secluded from the public gaze, particularly of men, and therefore must stay at home. However, when some man of the household has seen the drama and himself has been inoculated, he is likely to be eager to have his family protected also. Such men will lead us around through the winding streets and into their houses. We usually give about 150 to 200 inoculations at such a time.

"Then comes the lantern lecture, for which the crowd has been waiting. We procured the slides, as well as posters and pamphlets for this work, from the Madras Health Department at a nominal fee. They have a much larger stock of propaganda material than is available in this State. We attach the magic lantern to our car battery, unless the civil surgeon is able to borrow some other. The slides are well selected, and a short lecture in the two languages gives the main points about plague. After each part of the program a few more come up for inoculation, and at the end we seek out some people in their homes, to finish up the vaccine remaining in the tubes. Then we and the crowd go home to a very late dinner, sometimes after nine or ten o'clock."

Rats, Plague, and Religion

“ SEPTEMBER 7.

“ For about ten days now there have been no new cases of plague reported in Hanumakonda ; so people are coming in and the hospital is filling up. But there are reports of rat-falls here and there in the surrounding villages, and we are still carrying on with our lectures and injections in those places. Our own total inoculation figure since July is almost 3,000.

“ I have been called out to treat only one case of plague so far. That woman died ; most of the plague patients do. Considering that we can almost guarantee immunity if the inoculation is given not later than an hour or two after the bite of the infected flea, this is a striking example of the value of prevention.

“ It is well that I haven't had to care for many plague patients, because of the danger of carrying back plague-infected fleas to the hospital. As it is, we give the preventive inoculation to all in-patients who are not too sick from some other disease to stand the reaction. The fever, soreness of the arm, and general physical depression from the plague vaccine, are three or four times severer than from the typhoid preventive injection.

Rats, Plague, and Religion

“The Government provides free vaccine and extra medical and sanitary staff for times like this; and they help poor people to put up their shacks in the plague camps. But the one big thing they haven’t done, and it explains why plague has not been eliminated before, is to give strict orders for quarantine, allow the sanitary corps police power and provide the help of the police in enforcing such orders. This is largely because there is not enough favorable public opinion back of the efforts of the medical department. We find this understandable when we see some of the educated people protesting the most about cooperating with the few restrictions the medical officers have tried to put into effect in Hanumakonda. The case which was brought here from Hyderabad City was that of a member of the household of one of the educated and respected men of this town. And this man tried for a long time to put obstructions in the way of the civil surgeon when the latter was attempting to get the campaign under way!

“Seeing so much prejudice and fear, ignorance and superstition, we regret that in this day, when the medical profession knows as much as we do about plague, our numbers are too few to apply this knowledge adequately in the areas

Rats, Plague, and Religion

where we are most needed. We wonder what it must have been like in former times, when the medical practitioners could do no more than advise the use of some crude medicine, a charm, or blood-letting. That was the state of medical knowledge when plague was rampant in Europe. Unfortunately, such is still the condition among many of the old traditional practitioners of Ayurvedic and Unani medicine, not to mention a lot of quacks, both ancient and modern, all of whom exert a tremendous influence over the people here.

“Many orthodox Mohammedans believe that it is predetermined what day they will die, and of what disease. Why, then, should they do anything about it? If it is God’s will, they will die; if not, they won’t. Would not accepting means of prevention be trying to alter God’s will instead of submitting to it? (Islam means submission.) Many Hindus feel that they must offer a sacrifice to appease the god or goddess who is angry and is killing off the people. When they have done that—the best they know—why bother about rats, fleas and inoculations? Quite a number of Christians have a belief similar to that of the Mohammedans. But as a group the Christians have had more chance than the others for

Rats, Plague, and Religion

education about disease and prevention, from the western view-point. Therefore, even though with many of them there is a tendency to put all the responsibility on God, a larger number are eager and anxious to take inoculations and to cooperate with other preventive measures. Some of the Hindus make their sacrifices and then also come for injections. However, we are glad to find an increasing number, from all the religious groups, who agree with us in feeling that God wants us to do all we can for ourselves, and for others, to the limit of the knowledge he has given us."

As we have seen, the Government Hospital staff was responsible for most of the work of plague prevention. They were aided by the staff of the Mission Hospital and by two or three other doctors in town. As physicians, we were expected to help. That was our business, and most of the townspeople settled back and let us do it. Not so the Indian Christian Association. This group of educated, young, Christian laymen sought a way in which they might share in this public welfare work. They offered their services to go to the outlying villages for propaganda work in their spare time and at their own expense. On their own initiative, with the help of

Rats, Plague, and Religion

Doctor Jeevanandam or myself, they carried on a program similiar to what I have described. They were not only successful in persuading villagers to take the preventive inoculations, but in other ways their efforts made a deep impression on the village.

One evening we went to a near-by community where one of the Bible women has her home. There are many non-Christians in that village, and she has found them a hard group among whom to work. They have been unwilling even to give her a hearing. But she reported a different attitude there after the plague campaign. She told us: "How I wish the doctors and young people would come to every village where I have work. People were surprised to have those young people come, when it wasn't their job at all. And they say that a religion that makes us want to help others like that is worth hearing about, anyway."

The Bible woman's experience of changing attitudes in her village is not unique. Villagers who come as patients to mission hospitals are often struck by the difference in standards of service, and by the attitude of the workers toward their tasks, especially the more menial tasks. They compare this with what they have

Rats, Plague, and Religion

been accustomed to in their home localities, and often go back impressed with the reality and worth of the Christian message. In these informal ways they catch a glimpse of the meaning of Christian service. They also learn of Christ's teachings, and of Christian worship as they watch the nurses at morning prayers, attend the church meetings in the little chapel near the hospital, and best of all, hear a personal testimony as they are with the Bible woman or other members of the staff.

Those engaged in hospital work are only rarely privileged to see the effect of their ministry in changed lives and attitudes. Occasionally, however, we hear through the village workers of men and women whose transformation has been, at least in part, due to new insights and appreciations gained while in the hospital; and of villages once hostile, now opening their hearts and homes to the Christian gospel and those who bring it.

3. A HUMAN LETTER OF NOTIFICATION

"Oh, Veng-kar-ti, come in here! Vengkarti, come, *na-yi-na!*⁴ Come here!" Old Shan-

⁴ Telugu term of affectionate address for father, son, or grandson. It means literally "my," "he," i. e., my or my boy.

Rats, Plague, and Religion

tamma stood in the doorway, calling excitedly, and motioned with the downward beckoning movement of her hand, so characteristic of India, as the boy, hearing her voice, looked up.

Vengkarti, a lad of eight, was playing with the smaller children under the *neem* tree at the end of the street. A little later in the morning he would be going to school. Now, however, he had agreed to look after the little youngsters while his sister went with their mother to draw water from the well, a quarter of a mile away. When the boy heard his grandmother's call and saw her urgent beckoning, he picked up the baby and, leaving the others, ran over to the door of his uncle's house.

"What is it, Grannie?" he asked.

She took the baby out of his arms, and said: "Go fetch a stick, *nayina*. There is some kind of animal over there in the corner of the house. It looks like a bandycoot.⁵ I went to get some zonalu (kaffir corn) out of the box and there was that thing behind it!"

Vengkarti knew it was unusual for such an animal to show itself in the daytime, but he

⁵ A large rodent, about the size of a cat, which frequently bores its way under and into the houses, seeking food. Like the rat, it is susceptible to plague, and is thus an additional carrier of that disease, since the rat-fleas—which actually transmit the plague germs—feed on the blood of this animal as well as on that of the rat and of man.

Rats, Plague, and Religion

rushed over to the fence near-by, pulled out one of the split bamboo sticks, and then hurried into the house and over to the corner to see if the animal was still there. He would chase it away, since his grandmother was so frightened by it.

It *was* there, lying perfectly still. He hit it once with the end of the stick, but even then it didn't move or make any sound. So he went up closer. "Why, Grannie, the bandycoot's dead!" The old lady's eyesight was none too good and, in the dim light inside of the hut, she had seen only the dark form and had run out frightened without noticing anything more.

"Well, you'd better take it outside, for pretty soon it will smell. I wonder what made it come in here to die? What kind of omen is that?" Shantamma kept wondering about it as she returned to cleaning the grain and preparing the ingredients for the curry. She held the baby in one arm, while Vengkarti took the dead animal outside and threw it over in the field. By the time he came back his sister had returned and again taken charge of the baby and the other little children.

"That was a big bandycoot, Grannie," said Vengkarti, as he stopped at the door for a mo-

Rats, Plague, and Religion

ment; "it trailed on the ground beside me as I carried it away."

"Wait, *nayina*"—Shantamma had caught a glimpse of something red on her grandson's knee. "Did you hurt yourself?"

The little boy, who was willing to chase a bandycoot, hadn't meant to tell how he had stumbled and fallen on his left knee as he ran back. "Oh, I just fell and skinned my knee. I'll wash it off, and then go along to school. Don't let any more animals come to see you while I'm gone, Grannie." With that he ran off to his own house, where he washed his hands and his knee. Picking up his slate, and knowing that he was behind time he ran fast the short distance to the teacher's house, where the school met.

Shantamma had become a Christian a few years before, after her husband died. Since then she had preferred to live with her son Yacobu and his wife, for they were also Christians. They had had a number of children. The older ones had died, and there were just three left, a boy of fourteen, who tended cattle in the fields, the little girl, and Vengkarti. When a few months before Shantamma's other son, Kor-tai-ya, had lost his wife, and there had been no one to take care of his house or of the little baby, the old

Rats, Plague, and Religion

lady had moved the four houses down the street, so that she might take over the responsibility. Kortaiya, like the majority of the Madigas in that hamlet, had not as yet become Christian.

There were no Christians in that village except those who had been Madigas, and they were still considered such (outcastes) by the people. So these Christians and their Madiga relatives all had their houses close together in a *pallem*, outside the main village, quite separate—as is the custom—from the homes of the caste people. Whether they were Christian or not, they all did the same kind of work. Of course, the preacher and his wife were an exception. They taught school and held services in their house. It was a little larger and cleaner than the other houses, and was located just a little apart from them, at the place where the main village street entered their hamlet. Another exception was the young man who had been away to High School. He, too, was exempt from the usual Madiga occupations. His job was that of assistant clerk to one of the village head men.

All the other grown people, however, and the older boys and girls, either went to the fields to do the heavy work in connection with the farming, or served as sweepers in the caste houses in

Rats, Plague, and Religion

the village proper. They all had plenty to do, for there were around four thousand people in the place. While the Christians had their separate meetings, and refrained from taking part in the old rituals and ceremonies still followed by their relatives, in most matters of every-day life they shared with the rest in the cooperative affairs of the little community.

It was three days after the finding of the dead bandycoot that Vengkarti came down with fever. When school was let out in the early afternoon, he gave some excuse and went home. He always liked to join in the games, even with the bigger boys, but that day he just didn't feel right. He didn't know why, except that his head ached terribly.

His father and mother found him lying on the bed when they came home from work. They were not particularly alarmed, however. He had a fever, but no other symptoms that they could discover. Fever is quite common in Indian villages; so they went ahead with the usual home remedies and nursing care, and later got some fever pills from the preacher's wife.

The pastor, Joel, was away at a meeting in Hanumakonda, and on the way back he stopped to visit some relatives. By the time he returned,

Rats, Plague, and Religion

Vengkarti had been ill for three days. Hearing of the little boy's sickness, as soon as he arrived he went right over to see him. He asked all about the illness. The parents said it was fever, just fever; then they remembered that his leg was sore; and he seemed now to have a little cold as well.

The preacher thought the boy looked very sick. Fever patients didn't usually become so weak in just a few days. He advised the parents to take the boy to the mission hospital in Hanumakonda. But they objected. They had their work to do; it would be difficult to get away; and they saw no necessity for so much worry about Vengkarti. Didn't he have just a simple fever, and a cold? Joel finally yielded to their arguments, and even found the remainder of some medicine which had seemed to help him one time when he had a cold and fever. Some of that he gave to Yacobu for the boy, and the rest to Shantamma, who was now down with fever, also. She was having pains in her legs, she said, and had felt feverish for two or three days.

But when, after a day or two, the medicine gave out, neither Vengkarti nor his grandmother were any better; in fact, they were worse. In the meantime a young man down the street had

Rats, Plague, and Religion

fallen ill. Joel thought possibly the youth was going to develop pneumonia, for he complained of a severe pain on the side of his chest—up under the arm. Yet he didn't cough.

Joel had repeatedly urged that each of these three sick people be taken to the hospital, but as long as he had medicine to give them, and fever seemed the principal symptom, the relatives paid little attention to his pleas. And when, together with the High School boy, he reported to the head men of the village (the land patel and the police patel) that there were some very sick people in the pallem, apparently he got no farther. One of the duties of the police patel is to investigate cases of sickness in the village, and to list the various diseases and their incidence in his periodic report. Moreover, anything which looks like a contagious or epidemic disease, he is supposed to report immediately to the Civil Surgeon's office in Hanumakonda.

Joel didn't know about the bandycoot; little Vengkarti and old Shantamma hadn't attached any special significance to it and so hadn't mentioned it to anyone, either before or after they became ill. However, even if they had been told, neither he nor the police patel would have thought it worthy of mention.

Rats, Plague, and Religion

"What is the matter with this boy and the old woman?" the official asked, as he pulled out the disease record-book from the pile on the table.

"Fever, sir," the preacher answered politely, "and there is now also a young man"—he mentioned him by name—"who is very sick with fever, too."

Whereupon the patel wrote down three cases of malaria. (He could carry over the entry to the "Cause of Death" book if they died.)⁶ He dismissed Joel and went on with his work. Why should he, a caste man and one of the chief landholders of the village, go down to the sweepers' houses to investigate, just because two or three of the outcastes were sick. Hadn't the Christian teacher told him what was the matter with them? Suppose he did go down to those hovels, and some of the untouchables happened to brush against him, he would then have to take a special bath and go through with a purification ceremony. As a matter of fact, the patel didn't even think of doing this. The report had not aroused his curiosity at all. He was neither a doctor nor a sanitary inspector. He was a police official. This business of reporting diseases was just an-

⁶ These village records are the principal source for the compiling of disease and mortality statistics. It can readily be seen why such statistics may be quite faulty.

Rats, Plague, and Religion

other one of those extra duties that he had to try to do as best he could whenever he found time.

It was on the sixth day of his illness that Vengkarti was finally brought to the mission hospital. All three of the patients were much worse, and the preacher continued to insist that they should be taken to Hanumakonda. The elders agreed, but thought it would be best to take one first, and if he improved, then the other two could go for treatment. The grandmother refused to leave her son's home, and the young man was afraid to go. He suggested that it would be a good idea for the Christians to take their boy first, since it was a Christian hospital. Besides, Vengkarti had been ill the longest, and seemed worse than the others.

Yacobu and his wife had risen early that day, and took turns carrying Vengkarti, as they walked the ten miles from their village to Hanumakonda. When at last they arrived, the little boy was very, very tired and was so glad to be put to bed in the hospital ward.

The parents told of the several days of fever and of the cold, and the sore on the knee seemed to explain the little swollen gland in the groin. So the boy was admitted. For several reasons, plague was not thought of at the time. Nothing

Rats, Plague, and Religion

in the brief history suggested it, and there had been no rat-falls or plague cases reported from the region around Dhar-ma-sa-ga-ram, the village from which they came. Moreover, it was the beginning of the hot season, when plague usually lets up for a few months.

Even though it was only early in March, the weather was getting quite hot. Each day the early afternoon temperature had been climbing a little higher. It was nearly 100° the day that Vengkarti was brought in. The increased variation in temperature from day to night, which is characteristic for that part of the year, was accompanied as usual by an increase in colds and other respiratory infections. Every night after midnight the temperature falls abruptly to a point twenty or twenty-five degrees below the high point of the previous afternoon. Many who go to sleep hot and perspiring, and without any cover over them, awake thoroughly chilled because of this sudden change. These relatively chilling nights all during the hot, dry season, even when the day temperature reaches 115° and 120°, explain why there are so many colds and cases of "flu," and even pneumonia, during this period. The large amount of dust is also a contributing cause.

Rats, Plague, and Religion

We had been having a number of cases of severe grippe in the hospital, and at first Vengkarti looked like some of these patients. But more careful examination failed to reveal anything in his throat or lungs which would explain his high temperature and extreme prostration. So we decided it must be plague that had caused the swelling in his groin, rather than a spread of infection from the knee which he had hurt when he fell. A puncture of the gland was made, and sure enough, the smear showed plague bacilli.

That discovery created a serious situation, a plague case in a ward full of other patients. We immediately reported the matter to the civil authorities, so that arrangements could be made for the little boy to be removed to an isolation hut outside the town. But there was much more requiring attention. The other patients in the ward, irrespective of their condition, had to be inoculated, and all of the staff, where this had not been done within six months. And the whole ward, walls and floor, had to be treated with a liberal supply of kerosene-soap emulsion, to kill the fleas that might have been on or around Vengkarti, and that might carry the infection to others.

It was found that there had been excellent

Rats, Plague, and Religion

reasons for these precautions. As soon as I had discovered that we were dealing with plague, I had tucked my trouser-legs inside my socks, so that if any of the insects were present they would stay outside, where they could be seen, and might be killed by the spray from the "flit" gun. Sometime later, when I had a chance to go over to my home, I stopped outside to respray trousers and socks, and then, after going inside the door, replaced them in the usual position. While doing this I saw a flea on my sock. Before I could catch him, he had jumped off on the rug. I remembered the old taunt of childhood days, which we used to hurl at a laggard in a race, "You couldn't catch a flea!"

Where there was one flea there might be more, and there was a strong chance that I had brought infected fleas from the patient. So it became necessary for all the family, including the three-weeks-old baby, to take immediately the preventive inoculations. The reactions, fortunately were not too severe, except for our older boy, who ran a temperature of 105° for two days. But even at that we appreciated very deeply the discovery of bacterial vaccine.

Poor little Vengkarti! We felt so sorry for him, and yet there was so little that we could do.

Rats, Plague, and Religion

It was almost certain that he would die, and yet we would have liked to be able to give him some benefit of nursing care, in some sort of isolation ward. But there was no suitable place on our compound, and for the sake of safety for the other patients, as well as to prevent them from running away, we had to send the little boy off as soon as we could. The only place for him was a little hut, made with mats for walls and corrugated iron sheets for a roof, out at the edge of town. It was very hot inside when the sun beat down on the roof. Yet it was necessary to put Vengkarti far enough away from all the houses in the town so that infected fleas could not get to the other people, or to rats.

The next day he died. It was while we were out at his village that he passed away. If only we could have saved him! But through his arrival at the hospital we learned that plague had struck Dharmasagaram. He served, figuratively speaking, as a letter of notification, and because of him we were able to bring the epidemic under control there before many other deaths occurred.

The Government sanitary inspector and I, with a few helpers, went out to Dharmasagaram. We took Yacobu, for he was anxious to see that the rest of his family received the inoculation.

Rats, Plague, and Religion

He and his wife had been injected at the hospital. We parked our old Ford car in front of the house of the preacher-teacher. As soon as we had explained to Joel and the others who gathered about us that it was plague which had caused Vengkarti's illness, they spread the news. Almost before we could get our syringes ready the whole pallem was upon us, begging for the protective "needle-medicine." Within two hours we gave two hundred and forty-six injections. Then we visited the houses where Shantamma and the young man were. The latter's relatives now recalled that there had been a dead rat in their house, but they hadn't known what it meant.

We gave instructions for the removal of the two patients to an isolation hut out in the fields, as soon as it could be built, and also told the rest of the people that they must leave the infected area and build themselves temporary huts in which to live. The inspector left orders with the police patel as to his part in the campaign. He had been very much surprised and a bit chagrined to be informed by us from Hanumakonda that there was plague within his jurisdiction. But when he knew, he was glad to set about finding out just how far the epidemic had spread. While

Rats, Plague, and Religion

we were there, someone reported a rat-fall in one part of the caste village.

The patel didn't really become very active, however, in helping us to persuade the people to take the inoculations until we came again the next day and jollied him into taking the injection himself. The land patel, also a caste Hindu and a landholder, did the trick by giving the dare to his fellow official. Then they sent their men all over the village to bring people in, and we gave over four hundred inoculations, making the total about 750. That was a good start. The rest of the population of about 4,000 would be harder to persuade, and would have to be attended to later. If plague spread near their homes, that would make them consent.

It was a pleasure to work with my friend, the sanitary inspector. Soon after this experience he was transferred from Hanumakonda to another district. We were sorry to lose him. Frequent transfers of staff are almost the rule in Indian Government services. Certainly as far as the medical department is concerned, however necessary these changes may seem, from the point of view of administration, they clearly detract a great deal from the effectiveness of these workers in the local areas.

Rats, Plague, and Religion

We need more such devoted and conscientious workers in all the districts. One of the secrets of this man's attitude was brought out that day as we rode back from Dharmasagaram. He said he felt that God had put him in this plague prevention work. Before he entered the Government service (he had studied through the second year of college) he had been trying to do something for the care of plague patients in the place where he lived. Now he was having a chance to render a service much more effective—prevention, rather than mere care and problematic cure. And he felt that this was for him the will of God—or Allah, as he, a Mohammedan, called the Deity. His interpretation of submission to the will of God is very different from that of many of his co-religionists, who feel that because everything is predetermined there is no use of their doing anything about the prevention of disease and death.

To those engaged in public health work whose basic belief is in fate—*kismet* or *karma*—as the determining factor when disaster comes, endeavors to prevent disease and improve public health must seem a mere ineffectual routine. But there are in the Government medical service a number of officials from the various religious

Rats, Plague, and Religion

groups who resemble this Sanitary Inspector in that their work means more to them than just a job. To them it is a calling, a dedication of themselves to meeting the needs of the poor and ignorant people all around them. These men are acutely aware of the limitations in their staff and their appropriations, and are very anxious for help, not only in meeting the need, but in arousing the public to a knowledge of, and an interest in, doing something about it. What an opportunity this is for an effective service by our Christian ministry of healing! How tremendously it would help if we could have another mission doctor who could spend all his time in prevention work, not only around Hanumakonda, but in all the other fields of our Deccan mission, covering an area about the size of New York State.

It has been frequently observed that the Christians as a group, even the ignorant ones in the villages, offer the least obstruction to and give the most cooperation to the health-propaganda work. But before they can offer their cooperation and before it is effective, they need instruction. To make this possible we have been trying, whenever opportunity offered, to give talks on preventive work to the mission workers in the

Rats, Plague, and Religion

villages—the preachers and teachers. To help them to be effective health workers, we need not only to give them pamphlets and posters, and show them lantern-slides about the different diseases, but we need the opportunity to go out to their villages and help them with the difficult task of propaganda there. Most of these Christian village workers feel the call to help in the alleviation of suffering. It is inevitable that a real Christian should try to answer the cry of physical as well as spiritual needs. But unfortunately many of them have concentrated on treatment, either because that was all they knew, or because they needed the small profit to be obtained in selling medicine to make up for their decreased income from mission sources. Because of their lack of training, and because of the wide-spread notion that the cure of disease consists only in the treatment of symptoms, these men tend to become quacks, often very poor ones. Joel and Vengkarti's parents thought that "fever medicine" should be adequate. To seek the cause of the fever was quite beyond them.

These Christian workers in the villages, however, without prolonged special training, but with persistent careful instruction and help, could be of great value in the work of prevention. We

Rats, Plague, and Religion

are trying to lead them to see this greater opportunity. They have the spirit of service and the desire to teach and share which they got from their Master. They will need continued instruction and support during the time when they are laughed at in their villages for making innovations. Especially is this true in the field of sanitation, where change is as difficult as it is urgently needed.

4. AFTER PLAGUE, FIRE

Did you ever read the story of how bubonic plague came to London? If not, read it. It will help you to understand how many people feel in the countries where that disease still prevails and takes its annual tribute of thousands and thousands of lives. See that terror which makes them run about in the streets, and that worse form of fear which paralyzes them so they just sit and quietly wait for death to strike! There were some things they didn't understand ("Knowledge casteth out fear")—such simple things, they may seem to you—rats, fleas and germs. Most of the people in India still don't know about the relation of these things (some of them so little, microscopic) to the mysterious disease that comes so quickly and kills so ruthlessly.

Rats, Plague, and Religion

What did the people in London do? The best they knew; but mostly they fled, if they could, and often carried the infection with them. So it is with many in India. And when death comes close, in their own house, they run quickly and offer a sacrifice to their gods that the plague may be stayed; or else fatalistically accept it as the inexorable will of God. It depends on background and training.

In London, after the plague had raged for a time there came a great fire. It, too, took many lives and destroyed much property. Yet in the end it was a blessing. For never again did bubonic plague gain much foothold in that city, or in England. The homes of the rats and the fleas, that had housed many people too, were gone. Now? But there could not be one fire which would clean plague out of India and China—and parts of South America. Canal Zone authorities recently ordered special precautions with regard to certain ships from some ports not so very far away. Plague infests too many cities, towns and villages for fire to be the remedy. And in any case no one would wilfully start such great conflagrations. Even if the people were removed, the property loss would be too great.

Some plan of wholesale removal of people

Rats, Plague, and Religion

from infected areas, some sort of slum clearance, must be carried out as a *sine qua non* of plague prevention. Already a beginning in that direction has been made in Hyderabad City. Old buildings have been razed and new rat-proof dwellings erected. It has been found, however, that the new buildings are not of much help unless the people can be further educated in their proper use. Meanwhile the remedy would seem to be stricter measures of quarantine and control of the movements of the people in infected areas. Such measures were carried out years ago, and helped to eliminate plague from some parts of Western India. An attempt was made more recently to follow these methods in Hyderabad and elsewhere, when plague prevailed. But after a time, quarantine, inspections of trains and roads, and the like, were abandoned. These measures were expensive, and not effective, for plague continued to come and go and spread here and there.

This failure has been due to many causes: First, the staff of trained public health workers and assistants was insufficient and the few available had so many other problems to work on besides plague. Secondly, it was necessary, for notifications of plague and for attempts at controlling it, to depend quite largely on local police

Rats, Plague, and Religion

constables or other officials, who knew their duty with regard to civil and criminal matters, but knew almost nothing about epidemic diseases. These men naturally shared the feelings and prejudices of the general public. They had to be called on for duties they did not understand before they could be fully instructed. They could do what they were told but—themselves understanding so imperfectly—they could not possibly adequately explain things to others. Thirdly, they had to deal with a general public largely indifferent to problems of public health—except when confronted with an immediate and specific menace—and unusually hostile to control of their movements and of the arrangements of their houses, and to official disturbance or interference with their manner of living; most of these matters being tied up with religious sanctions and customs.

It simply isn't natural to move out to the fields, or the wilderness, to live. It is so much easier to go to live with relatives in some other part of the town, or in a village far from the danger. This is the reason that prompts a large number of those who leave the plague-infected areas to disregard the advice and instructions they receive. The intelligent support and whole-hearted

Rats, Plague, and Religion

cooperation of a large section of the public is always necessary before health authorities will be given full police power, and even more before a successful quarantine system can be established and made effective. These problems have been confronted in every place where public health officials have been trying to combat disease. There are, moreover, two other special phases of the matter that deserve attention.

The social-economic system of India makes the problems of enforcing health regulations, without making exceptions and without "respect of persons," unusually difficult. Police constables and underlings in the public health service naturally stand in awe of officials and others of higher caste or social position. But officials and their families may be just as dangerous plague carriers, or disseminators of other diseases, as outcasts. It is quite futile to stop some people at a quarantine post, and allow them to pass on only after disinfection and inoculation, and then to allow others to get by uninspected. The idea of special privilege, of political influence, enabling one to "beat the game," does not have to be explained to Americans. But the problem is made enormously more complicated and difficult by India's political and social system and traditions.

Rats, Plague, and Religion

The second special problem of public health administration in India is that of *purdah*. What health inspector or assisting police constable would dare carry his quarantine inspection into the closed carriage of the train, or into the cart or car, whose occupants are hidden from sight by the *purdah*, the curtain that veils India's secluded womanhood? Without such inspection, how prevent women and children, actually suffering from plague, and many others fleeing from plague centers and carrying infected fleas on their persons or in their luggage, from traveling about and spreading disease?

Is the fight against plague in India hopeless? No, but it is very costly both in lives and property—like such campaigns in any country. People are seldom thoroughly aroused unless death comes very near.

The story I now have to tell is not of a fire like the famous conflagration in London; it involves just one small hut.

Vee-ram-ma had come to visit her brother, Moot-yum. He and his family were living in Day-sha-pett, and he worked in the tannery there, while his wife, Veng-kam-ma, carried on the lowly tasks in the village and fields, which were

Rats, Plague, and Religion

the family's hereditary duties. For they were Madigas, the "outcaste" group of sweepers and leather workers.

The very day she arrived plague was reported in the village, just down the street and around the next corner. So they moved out in a hurry. It took that day and the next to get really settled in the hut out at the plague camp; but Mootyum begged off from work for one day, and got some mats and leaves, and he and his sister tied them together for the walls and roof of the new house. Vengkamma had to go into the village for her work there, but Dur-gam-ma (12) and Chin-nai-ya (5) helped. When at last they had tied a piece of cloth over the doorway, their task was finished.

Because of having to move so suddenly, they hadn't had a chance to celebrate properly the coming of their guest. Veeramma had come to talk about arranging for the engagement of her son, and for the wedding ceremonies to follow. It had been agreed long before that at the proper time Durgamma should be his bride, but there were details to be discussed. And she had some fresh news. That was really why she had come at this particular time. Their younger sister, who lived in a village a little beyond the family

Rats, Plague, and Religion

home of Veeramma's husband, had just given birth to a baby girl. Veeramma had been over to see them, and had promised to bring word to Mootyum, and ask him to consider the new baby as a possible match for Chinnaiya. That would mean he wouldn't have to look around among the families of more distant relatives.

Marriages are joyful occasions, and even the discussion of possible matches for the future requires something special. So, after they were settled in the plague hut, Mootyum told his wife to get some pork for the curry that night, and some rice; and he had brought home some *kulloo* (toddy—the fermented juice of certain palm-trees).

They ate well, and then talked. And as they talked they drank, and gave some drink also to the prospective "bride" and "groom." Pretty soon Chinnaiya went to sleep, for he didn't understand much about this wedding business. He only knew that his stomach was fuller than usual. And when the rest lay down for the night, they, too, slept very soundly.

There were still a few live coals in the ashes where the fire had been for the cooking. Later a little breeze came up and fanned them. It also blew the cloth at the doorway back and forth.

Rats, Plague, and Religion

This piece of old sari was long enough to drag on the ground, and had been fastened at the bottom with a small stone. But this dropped off, and then the breeze carried the door curtain farther inside the house—over against the coals in the fireplace.

There was a little smoke; but they were used to that—in houses without chimneys; and then a peculiar smell. But the family and the guest were sound asleep. A sheet of flame ran up the cloth and caught quickly at the dry mats and leaves. Still they slept—until at last their own clothing caught fire. Then they cried out, and the neighbors heard them. They rushed out and saw the flaming hut. Mootyum had been the first to rouse, and he really ran out before he was fully awake. Then Veeramma came out. The father hurried in again for his boy—his only son. The mother had been covering him with her body, too terrified to move. Farthest in and last to be rescued was little Durgamma, who had been on fire before she awoke. Her screams of pain now filled the air. The people from the near-by huts rushed about to help put out the fire and to keep it from spreading to their own thatch dwellings. They also applied the best first-aid measures they knew for the terrible burns.

Rats, Plague, and Religion

What was the first-aid preparation? It had certain of the qualities required: it was moist and would form a coating to keep out the air; and it was there, ready for instant application. How many uses India finds for the mixture of cow dung and water! It makes a hard surface when it is dry, and so is useful as a covering for the mud floors, which would otherwise be dusty. And after it is dry, there is no odor. It is used on tennis courts, too, and for other flooring purposes. It is commonly employed in village homes for poultices, especially on boils and after vaccination. Of course they know nothing of the danger of infection—of the pus that will develop almost immediately under the coat of dung, and especially of the greater danger of tetanus (lockjaw), whose germs are likely to be present in manure.

It was a little after midnight. The nearest doctor was about five miles away. There was no moon, and they had no light but the tiny lamps in their huts. It seemed best to wait until morning. The rest of the night several neighbors were kept busy applying the soothing paste to all five and trying to make them as comfortable as they could.

In the morning, as soon as it was light, they

Rats, Plague, and Religion

borrowed two ox-carts and brought the whole family to the mission hospital.

What a pitiable sight! At first the only way we could estimate the extent of the burns was by the areas covered with the "first-aid" paste. It was easy to see that little Durgamma and her mother were in shock and in a critical condition. Veeramma was not quite so bad. The father, who had awakened first, and the little boy, whose mother had shielded him with her own body, were not extensively burned.

We got busy quickly, dividing the work between the male ward, where we put father and boy, and the female ward, where we took the other three. What a job it was to get off that paste! By now it was just like cement, and had to be at the same time washed and scraped off. From the first there seemed to be hardly any hope for the poor little girl. Over half of her skin was burned, and much of that down into the flesh. We did all we could and made her as comfortable as possible. But she developed ulcers, and hemorrhage from her stomach and intestines, and so passed away.

It is not necessary to give the details of the treatment of the rest. If those who had part in sending out from America the gauze and band-

Rats, Plague, and Religion

ages we used could have watched the daily care of these burns, they would appreciate how grateful we are for such gifts. It takes a lot of these supplies to care for even one case, and we had a whole family on our hands. So after several weeks our stock ran low, even though we washed, sterilized, used again; washed, sterilized, and used again, each bandage and each piece of gauze, until they would no longer hold together.

Vengkamma, poor woman, lived about a month. But her burns had been deep and covered a large area, and she finally developed complications and died. Mootyum had been able to go home and take the little boy; and later Vee-ramma, too, had been discharged. They said they couldn't wait for skin grafting, they must get home. So they will have life-long scars; especially the sister who came to visit.

It was hard for them to provide food for themselves when they were not working, and impossible for them to take any real share of the expense involved in the long treatment of their burns. Mootyum paid twenty or thirty cents—maybe forty—and thought it a great deal, even though we had furnished food for his wife for quite a while. Such incidents show why mission hospitals find it difficult to be self-supporting.

Rats, Plague, and Religion

Fleeing from plague, this family had been overtaken by fire. The well-to-do can build their huts of corrugated iron sheets, and then hire someone to build up mud walls. It is safer that way. But this was just a poor family of Madagas!

II

“THE PESTILENCE THAT WALKETH”

“THE PESTILENCE THAT WALKETH”

ONE DIED; HUNDREDS LIVE

One morning quite early, before we were up, a call came at the front door: “Sahib! Sahib!” There are no door-bells or knockers on our houses in India. When I came to the door I found there a Mohammedan man of middle age, who salaamed in the typical Deccan manner, and said, “Doctor, there is a woman in our village who is very sick with fever. The family are worried about her and want you to come right away.” Further questioning failed to reveal anything more about the woman or her sickness except that he thought she was about to have a baby. His ignorance about her was not surprising, for the patient was not related to him; in fact, she belonged to a family of caste Hindus, and her husband had asked this Moslem friend to come into Hanumakonda for a doctor. There are a great many different kinds of fever, and so, even though I had the indication that this might be a complicated maternity case, I knew from experience that the actual condition of the

Rats, Plague, and Religion

woman might be very different from the report brought by one sent to summon aid. So I went prepared for as many different possibilities as I could think of. There was one, however, that I missed.

I went twenty-five miles, from the hospital to the village of Cha-gul, but most of the distance was covered quickly in our hospital car. This village was just off the main road that leads to Hyderabad. It was with some difficulty—as usual in such villages off the main thoroughfare—that we took the car through the winding street to the village center. Immediately a crowd gathered around the car, mostly men and boys, though an occasional girl or woman joined the group.

I was led through another winding street for a little way to the entrance of the house where the woman was sick. The front door was set in high mud walls. As I went in I realized that it was the home of a family of middle-class, land-owning farmers. The husband had met me at the car, but his answers to my questions did not help much. However, I was not left long in doubt about the woman's illness. I knew that, in all probability, the woman would be in the dark, inner room of the house. But I didn't have

“ The Pestilence that Walketh ”

to see the patient to find out what was her trouble, for on both sides of me, as I went through the two outer rooms, were six or seven children of varying ages whose faces and bodies were all covered with an eruption. Some of the pocks were nearly dry, while two of the children had apparently just gotten over the fever stage of the disease, and their eruption was still moist. This was clearly an epidemic of smallpox, and practically all the family had been attacked. The little woman in the bed in the inner room was about the most pitiful sight I have ever seen. I had to use my flashlight to see her plainly. Her body was almost completely covered with a rash of the malignant, confluent type. They said that after the man had been sent to call me, she had given birth to a premature infant, which had not survived. The mother was in a desperate condition. Her pulse was rapid, and I could see that in all probability the end was very near. What was there for me to do? I had been called from the hospital twenty-five miles away for one thing only, to save this woman's life. And now that seemed impossible. This very dangerous type of smallpox, with its many complications, is not often amenable to treatment, especially at such a late stage.

Rats, Plague, and Religion

The little woman was in great pain and very weak, but she asked hopefully for some medicine. I gave her something to ease her suffering, and possibly to strengthen her. I tried to comfort and encourage her. Then I called the family aside, and explained to them the hopelessness of her condition. There was nothing more I could do for the dying woman. The only satisfactory way to deal with smallpox is to prevent it. My attention turned, naturally, to the rest of that household.

The husband of the sick woman said he had had smallpox once and didn't expect to get it again. The children were now recovering from the disease and would probably be immune for several years. This family was fortunate in having so many recover. But there were undoubtedly many other people in all parts of the village who had been or would be exposed. Yet they could be protected by vaccination. I inquired of the crowd around the car whether the house I had visited had been the only one that the "Great Mother Goddess" had visited (smallpox is commonly attributed to her).

"Oh, no," answered several men. "Over there," one man pointed, "two persons died yesterday and two more are sick. Down among

“ The Pestilence that Walketh ”

the weavers and dhobeas (washermen) there are a number sick, and several have died. In the house next to me there have been three deaths.”

“ Have you reported this to the civil authorities, and have you asked for the vaccinator to come? ” I asked.

The man who acted as spokesman for the crowd was a Brahman, a leader in the village, and a practitioner of the old Hindu Ayur-ve-dic system of healing. He replied, “ Every year we have some cases of smallpox, but this year more people than usual have been stricken with the disease. It seems to be more severe, too, for there are a much larger number of deaths. We should like to have our children vaccinated. But what is the use of sending in a report to the Government? Why, the last time we sent for the vaccinator, it was two or three months before he was able to come. By that time, the epidemic was over and many people had died. But, sir, you are a doctor. Did you bring some vaccine with you? I will get the people to bring their children, if you will vaccinate them.”

That was just what I did not have with me. In fact, I did not have any vaccine at the hospital, for we do not have ice to keep it cold, so we have to order fresh stock as we need it from

Rats, Plague, and Religion

the Government laboratory in Hyderabad City, ninety miles away. I told them that I had no vaccine with me, but would report this epidemic to the Civil Surgeon in Hanumakonda, and ask if he could send the vaccinator soon. I also inquired as to the number of people in the village who would be willing to be vaccinated. The old Brahman and the Mohammedan who had come for me talked with the other men and finally estimated that there would be about one hundred and fifty who would consent to vaccination. Then they asked me if I wouldn't come back the next day and do it for them, for they were afraid that there would be many more cases developing before the Government vaccinator could get to their village.

Chagul is in Wa-ran-gal District, which is approximately as large as the State of Connecticut and has a population of about a million and a half. For doing the smallpox prevention work in this area there are usually only two vaccinators, and time is too short for them to visit the hundreds and hundreds of villages in the district as frequently as needed. Each man tries to cover a certain part of the district and vaccinates only those children whose parents understand and request this protection. Vaccination of all children



Vaccinating Team from the Hospital at Work in a Village

“ The Pestilence that Walketh ”

is supposed to be compulsory in Hyderabad State, but the vaccinators have more than they can do to take care of the willing ones, and do not have time either for much propaganda or for spending days in the courts to enforce the vaccination law on unwilling parents.

I told the men that I would see that someone came out to vaccinate in their village, in three or four days; as soon as we could get a fresh supply of vaccine. Then I explained that, although the Government provided the vaccine free, there would be some expense if I came out with assistants to do the vaccinating. We would gladly give our services, the Government would provide the vaccine, but they must share in the expense of our travel. Petrol (gasoline) was then about two rupees a gallon (eighty cents an Imperial gallon, or about sixty-four cents for the gallon of America). There were two reasons why I asked these people to agree to pay something. In the first place, with our reduced appropriations at the mission hospital, we could keep little or nothing in the budget for preventive work. It had to be an extra, for there is usually no income for this feature. Even in America people are not as willing to pay for prevention as for cure. In the second place, their obligation to pay would

Rats, Plague, and Religion

help to secure results. I knew from experience that unless they agreed to help with expenses, the one hundred and fifty subjects they promised would probably shrink to one hundred or less when we came to vaccinate. The two men who seemed most interested, the man who had summoned me and the Ayurvedic practitioner, finally agreed to be responsible for the cost of the petrol when I should come.

It was four days later that we returned to Chagul. The poor woman we had seen had died that same day, and there had been several other deaths. We were fortunate in finding one of the Government vaccinators in Hanumakonda, and since he was headed for the western part of the district he came with us and helped with the work by recording the names and filling out the reports to be sent to the office in Hyderabad. In all of our propaganda and preventive work, we had found that it was much more effective to have a group of helpers along. Besides the doctors, who do the actual work of vaccinating, and a nurse or two to wash the arms, one or two good talkers are needed to round up the candidates. It is not surprising that with this group we were able to make a much better showing in that village than the vaccinator could have made

“ The Pestilence that Walketh ”

by himself. Partly for this reason and partly because the sponsors of the request had been active, we vaccinated between three hundred and three hundred and fifty instead of the estimated one hundred and fifty.

We had not been able to leave the hospital until the middle of the afternoon, so it was dark before we finished with the vaccinating. Then the car refused to start. Aaron, the motor-boy, and I worked on it for quite a while, and all of us were very hungry. Our Brahman friend was quite solicitous and wanted us to spend the night in the village instead of returning to Hanumakonda. He even offered us some refreshments. But we had to decline to stay, for we all had work to do early the next morning, and with the vaccine exhausted there was no point in our remaining. We had not vaccinated all the people in the village, by any means; there were still about two thousand as yet unvaccinated, but we felt much happier, as the car finally started and we rode back to Hanumakonda, to realize that while we had been able to do almost nothing for the woman who had been so ill, we now knew that there were many hundreds in this village who would be saved from that great pestilence, smallpox.

Rats, Plague, and Religion

A few days later we heard that smallpox was raging in another village near Chagul. So, as soon as we could get more vaccine, we made a trip there also. We found that the vaccinator had been there to do a number of children in the caste Hindu part of the village, but he had not visited the outcaste pallem. This might not be entirely a matter of discrimination, for the poor and depressed are more likely to be frightened by strange procedures, and so their children might have run away, even if the vaccinator had come to them. But we had a chance for contact with them, since some of their number had become Christians, and they had a Christian teacher in their village. With his cooperation, we were able to get three or four hundred children and adults to be vaccinated. The children were very happy, and so were the adults, to have us take pictures while the vaccine was drying on their arms. You will notice in one of the pictures that the old granny scratches her head because of a new idea. We had suggested that she be vaccinated. She refused with a statement something like this:

“Oh, I have one foot in the grave already. Why should I let you give me a sore arm? If I get smallpox, I will get it.”



While the Vaccine Dries on Their Arms a Group of Outcaste Children Pose for a Picture

“ The Pestilence that Walketh ”

Disease prevention work has just begun in India. That it is far from complete and successful we can judge by the fact that within the last two years, when the epidemic has been worse than usual, hundreds of people have died of this disease in all of the districts. We need a larger staff to carry out effective propaganda, and we need to include in the program not only single vaccination of children, but revaccination of adults. Many people of forty and fifty have died in the recent epidemic, for, though they were vaccinated in childhood, they have never been re-vaccinated.

It is now quite uncommon in America and a number of other countries to see a person with pockmarks on the face. Within the last fifty years, and especially in the last twenty-five, this change has been brought about. In the first half of the nineteenth century thousands perished from smallpox. Despite the great improvement wrought by vaccination there are still a number of people in America who do not appreciate its value, and are carrying on campaigns against it. I should be very glad to have the opportunity to invite these people to go with us into some of the Indian villages where smallpox is a reality,

Rats, Plague, and Religion

and not just a subject of debate. If they really believe that vaccination is not necessary, it would be a very simple matter for them to test their belief by remaining for a short time in the unvaccinated part of the village.

III

“NEW OCCASIONS TEACH NEW
DUTIES”

“NEW OCCASIONS TEACH NEW DUTIES ”

“ OH, I GO FAR AWAY! ”

“ Oh, I go far away! ”

“ But how far? ”

“ Oh, *far* away.” The inflection would convey the idea of great distance. “ Why, I always go down to the field at the far end of the street. That’s where all the people from our part of the village go.”

“ What about See-tam-ma and the other women, do they go there too? And after she fell ill, what did she do? ”

Ra-mai-ya thought, as many others have, “ What foolish questions these doctors ask! ” However, he had developed confidence in this particular doctor, who seemed to know how to cure fever, and who had asked many other questions equally peculiar the day Ramaiya had brought Seetamma, his wife, to the hospital. How sick she had been! But she seemed better now. The doctor apparently knew his medicines even if he was ignorant of village life. The old

Rats, Plague, and Religion

village Brahman could afford to be patient, and was willing to explain.

“Of course the women don’t go out there with the men. There is a grove of trees over beyond the well, which is a little distance back from the houses. It is quite convenient for the purpose, for as they pass the well, they can fill small vessels with the water for washing themselves afterward. On the way back, they can bathe beside the well, and fill their large water-pots to carry home.”

The doctor asked again how Seetamma had managed after she became ill. Ramaiya went on:

“For the first day or two, my wife could walk around all right and attend to her accustomed duties. In fact, we did not know that she had fever, for she prepared her usual fine curry. Later, she complained of feeling weak, and my son’s wife had to help her around, and carry all the water for her. But the mother of my sons always prepares my food with her own hands. Of course she took her bath as usual before preparing each meal, and especially after she had been over to the grove in the morning.

“One morning, though, as she came back from the grove to the well, she suddenly felt faint and

“ New Occasions Teach New Duties ”

things turned black in front of her eyes, so that she stumbled on a rock that had once been a part of the side wall of the well. She would have fallen, had not my son's wife been right there, drawing water. Ma-ha-lak-shmi helped her to bathe and brought her home, and then called me to see her. It was only then that I learned that my wife had been feeling ill. They said that she had scarcely eaten anything for several days. Naturally, I wouldn't notice that myself, for as you probably know the women in our houses do not eat until after the men and children have finished. It seems that she had been obliged to go to the grove quite frequently, too. My daughter-in-law told me that this had been particularly the case that morning; and that was probably the reason for her fainting spell as she came from the grove toward the well.”

The doctor knew a little more about village customs than Ramaiya realized. His thought went on as the Brahman talked. Of course, Seetamma had carried her little pot of water and had washed in the usual way over under the trees. But then she had bathed right beside the well. The well and the grove must be pretty close together—and the grove was on higher ground. The well was an old one, too, with

Rats, Plague, and Religion

broken-down sides. If the water in it was not already heavily contaminated with typhoid bacilli, it certainly would be after the next shower of rain, when the water washed down from the grove into the well. He must see if something could be done to disinfect that well. Yes, even though it did belong to Brahmans!

The mission doctor had met Ramaiya outside the women's ward after making his morning rounds. He had just seen Seetamma and found her improving. She had had a difficult time, for typhoid fever in a patient kept too long at home, with only the very little food or water that she would ask for, is often hard to get under control. Nevertheless, the woman's fever was now coming down slowly. Afterwards, having seen a number of carts waiting outside the dispensary, the doctor had started out in that direction. But meeting Seetamma's husband, he had stopped to talk with him. He wanted to find out more about the home situation—how wide-spread the epidemic might be, or might later become, in Ramaiya's village. He was anxious, also, to introduce the subject of preventive inoculation for Ramaiya and his family, for the fresh vaccine he had ordered from Madras had arrived. With this in mind, the doctor had asked the questions

“ New Occasions Teach New Duties ”

Ramaiya had thought so foolish; and now he went on, for he wanted, if possible, to show this man, who was a leader in his village, how typhoid is caused and spread, and how it can be prevented.

“ Seetamma was so weak then that she had to stay in bed? It was a good thing for her that she did. This disease which you know as ‘ poison-fever ’¹ is really not just a fever, but a serious disease of the intestines. It produces many ulcers there, which are usually about the size of a four-anna piece.² If the patient is not receiving enough of the right kinds of nourishment, these sores tend to go deeper and deeper into the intestinal walls, and sometimes they break right through. This may happen when the patient makes some sudden movement which puts extra pressure on the weakened parts.” While the doctor was explaining this, he was illustrating with little pictures on the back of an envelope. Then he returned to the previous topic. “ How did you manage when your wife couldn’t get up out of bed any more? ”

“ Well, you know, there is a sweeper woman who comes in twice a day to clean up all of the

¹ The Telugu word for typhoid fever.

² A silver coin about the size of a dime and of approximately the same value.

Rats, Plague, and Religion

house except the kitchen. She isn't allowed to contaminate that. It is her duty also to carry away the *my-la*³ that the babies make. But the trouble is that those people are so lazy and shiftless." The Brahman accompanied this statement with the usual deprecatory gesture.

"We could not persuade that latchi to come on time. Sometimes it was even afternoon before she put in her first appearance. The odor often became so sickening that we had to stay out of the house. Apparently it made no difference to the latchi that we could scarcely eat our food because she so neglected her work. She insisted that she had to cook the kaffir corn for that worthless husband of hers before she started out for her day's work. She made the excuse, too, that she had so many other houses to clean. Finally we had to bribe her every day to stay around and do what was needed when my wife called. But even then, with that dirty woman coming in and out all the time, my sons and I didn't have any appetite, so we decided to go over to my younger brother's house to eat. The

³ The Telugu word for anything unclean. There is apparently little attempt made in most Indian households, especially in the villages, to train the children. This lack of training, even in children five years old, is manifest in the necessity for the outcaste sweeper to come to the house each day, and also to be on hand when these youngsters are taken for a train journey.

“New Occasions Teach New Duties”

menials here at your hospital seem to be better trained. Ma-ha-laksh-mi, my daughter-in-law, says she hasn't had to bribe them yet. When will they ask for a gift?”

“The nurses won't ask for any gift; at least they are not supposed to,” the doctor answered. “They are taught to do all phases of their work as a part of their service in helping to make the patients well. These girls are Christians, though they may appear to you as outcaste sweepers who have just cleaned up and put on uniforms. Our Master served others, even in menial ways, without thought of reward, and he taught that in the work we do to help others, even in the humblest tasks, we serve him. Of course, the nurses like to receive, and to give, presents. Who doesn't? But I think that if you offer a present to those who are taking care of your wife, they will suggest that you wait until after you have paid your bill, and then that you give the gift to the hospital. You see they know how expensive it is to take care of the sick people. And if, because you appreciate the quality of their service, you insist on giving them something, they will probably ask you to give it rather to a fund that can be used for all the nurses.”

The doctor wanted to tell the Brahman more

Rats, Plague, and Religion

about what he thought of the system, in which those at the top complained because the people whom they forced to perform menial and ceremonially dirty tasks—and then despised them because of that very work—were dirty and not dependable. But he saw some anxious relatives coming over toward him from the dispensary. He would have to talk with them in a few minutes, and examine the patient they had brought. Now he must get back to the subject of typhoid.

“Old man,”⁴ he said, “a number of learned men have been studying ‘poison fever’ for a long time, and they have found out how to treat people suffering from it in such a way that most of the early cases can be cured. In addition to this, they have discovered what causes the disease—little tiny germs, which can be seen only under a microscope. While these germs are producing the fever, the ulcers, and the other symptoms in the patient, they are multiplying within the intestines. Then, in various ways, some of them are carried to people who are well, and they too become ill. These scholars and scientists now also know ways to keep people from getting

⁴ A term of respect in a country where old things, old customs, and old people are revered. “Old man” there does not have any of the connotation of jocularity or familiarity that it often has in America.

“ New Occasions Teach New Duties ”

this terrible disease, which causes so many days and weeks of fever and misery.

“ We have learned from these teachers how to care for typhoid patients, and we protect ourselves by taking a kind of ‘needle-medicine.’ You and the rest of your family have been exposed, and you ought to take this injection, too. I have some of the medicine here, I ordered it, specially, from Madras.”

“ But, Doctor, I am not sick, nor are any of my family, except my wife. We are grateful to you for taking care of her, and I will pay the charges when she gets well. That is, if you don’t ask too much. You know I am very poor,⁵ and you will get great merit for curing her. But *I* don’t need any medicine.”

“ Please let me explain.” The doctor led the Brahman over to the laboratory and showed him the microscope. Placing a slide with some bacteria under the lens, he said, “ These are like the germs that caused your wife’s illness. They are the poison that makes the ‘poison fever.’ See, here in this book is a picture of some of them, magnified as they are in the microscope. The germs of typhoid may get into water, milk, or

⁵ A plea common to people of all classes—but especially characteristic of some of the Brahman group.

Rats, Plague, and Religion

other foods, and when they enter the human body they multiply and cause the sores of which I told you before. Millions of these germs find their way from the typhoid patient to places where they may contaminate food or water for other people."

At this point, the men who had come over from the dispensary interrupted. They had been showing a mild interest in the conversation, and even crowded into the tiny laboratory during the demonstration. Each wanted his turn looking through the microscope. But now they were impatient of further delay.

"My son is very sick; he has a big abscess on his leg. Come quickly, Doctor, and see him. He is crying with the pain, but your man over there refuses to give us ointment until you have made an examination."

"Sir, my mother has been ill with fever for three weeks. I have been waiting here all the morning. Please give me some medicine to take to her. The woman doctor told me I would have to bring my mother here, to find out what kind of fever it is."

Just then a nurse came up with an urgent summons from one of his assistants, so he told Ramaiya he would see him again in the afternoon.

“New Occasions Teach New Duties”

About five o'clock, when the operations were finished, Ramaiya was in the interested group outside the operating-room. They were waiting to hear about the operations and it was only after the doctor had talked with them and shown them the specimens, and had visited a number of patients in the wards, that he could resume his conversation with Seetamma's husband. They went to the office where they might have fewer interruptions.

The doctor gave the old man copies of the leaflets—in Telugu—“The Most Dangerous Thing We Do,”⁶ “Stop, Look, Beware—The Fly!” and “The Fly—So Small, But More Dangerous than the Elephant.” “You,” he said, “are a man who has been educated in all the old teachings, and you know and follow the ancient rules for living. It is because you can understand and because, in your position, you can have some influence, that I am trying to explain about some of the new rules of living and of health. They, too, come from the writings of learned men.⁷ There is a saying in our language:

⁶ “Promiscuous Defecation.” This and other leaflets are obtained from the Madras Health Department at a nominal charge.

⁷ Among Hindus an appeal to “the writings,” and the use of quotations and analogies, are very common methods of reasoning.

Rats, Plague, and Religion

“ ‘ New occasions teach new duties,
Time makes ancient good uncouth.’

“ The old rules, we know, were established on the basis of experience. Going out to the fields, where the sun could help destroy disease germs in the excrement, and rigid rules about washing of the hands and bathing, helped to prevent much illness. In our country there was much the same system until we learned more of the cause of diseases, such as typhoid, and how they are spread. The new knowledge necessitated changes, and made the old ways seem no longer good—in fact, even dangerous.

“ Why did I ask you those questions this morning? In order that I might explain this to you, using your own house and village as an illustration. Some typhoid germs got into the water your wife drank; or perhaps flies brought them and deposited them on her food. Then she fell ill. As I told you, not long after she started to have fever, the ground over in the grove was contaminated. Now that it is the rainy season and cloudy nearly every day, the sun doesn't shine much in the grove, does it? Whenever there is a shower, the rain water washes down that slope toward the well. It is very probable that some of those germs are now in the well,

“ New Occasions Teach New Duties ”

growing and multiplying as they readily do in well water. And all those who drink that water are likely to contract typhoid fever. You and your family were all using that water, weren't you? ”

“ Yes,” said Ramaiya, “ that is our own Brahman well. If some low caste person should come near it, we would know what ceremonies to perform in order to purify it. But to get rid of this ‘ poison ’ that causes fever, what can we do? ”

“ There is a medicine which can be put into the well, to destroy the germs—that is, it will neutralize the poison ” (the doctor hastened to add this, for he didn't want to lessen Ramaiya's interest by arousing the Brahman repugnance to destroying life). “ We will report the matter to the civil authorities and ask them to examine the water, and to put the right medicine in the well, if the tests show that it is contaminated, as I am sure it must be. You will need to help by explaining the matter to the other Brahmans. I feel certain that the Sanitary Inspector will co-operate with you by letting one of you draw the water from which the sample is taken, and by giving the disinfecting solution to you to put into the well. In that way you will not have to bother

Rats, Plague, and Religion

with ceremonial purification in case the inspector is not a high caste Hindu. Then, seeing that the Brahman well has been treated, the people of the other castes will want to have their wells disinfected also."

"Yes, that will be a good way," agreed Ramaiya. "We must get some medicine to put in our well. But, if it was water that gave my wife the 'poison fever,' why didn't the rest of our family contract the illness, too?"

"Some of them may yet. It takes longer for the fever to develop in certain people than in others. And not all are susceptible. But you yourself and the rest of the family are still in danger, as well as your servants and the others in the village."

"But is the water the only cause of the fever? Didn't you say something about flies?"

Though the man seemed not to be convinced as yet of the danger from the well, his interest was apparent, so the doctor continued, following the Brahman's question with another.

"You have plenty of flies in your village, haven't you?"

"Why, of course, we always have flies, and especially after the rains start. They were so troublesome to my poor wife. Most of the time

“New Occasions Teach New Duties ”

while she was in bed she had to keep a cover over her face, for there seemed to be more flies than usual in the house.”

“Do you know why?” the doctor asked. “Flies know no rules of propriety. After they went to your wife’s bed, while she was waiting for the sweeper woman to come, they probably flew over and rested on your food, and then went to sample food in all the houses in the neighborhood. In this way, the flies could poison that food, even though you and the others were as clean as you knew how to be.”

The old man looked with some awe at the magnified picture of the fly, which showed the sticky hairs covering legs and body, to which many germs and other things might adhere. “But what can we do?” he asked. “We try to brush them away from our food.”

The doctor had noticed that the Brahman had looked askance at the nurses when they had been “swatting” flies near or on his wife’s bed. (Despite the fact that the woman’s ward has the only screening in the hospital, many flies come in when villagers, not understanding the purpose of the wire doors, leave or hold them open.) The doctor again explained the urgent necessity of getting rid of the flies, both in the wards and

Rats, Plague, and Religion

even more, in the homes. Then he took the man out to see the "fly house" which had been built according to a plan worked out at the Pasteur Institute in Coonoor. He showed how the flies laid their eggs in the manure which filled the upper part, and how the larvæ are caught in the water trough at the bottom. They saw several hundred of the little white worms trapped there, unable to reach the ground, as they must if they are to become pupæ and adult flies. This idea appealed to the Brahman more than the direct method of killing flies, though he did understand now, he said, why the nurses were trying to get rid of these insect pests. And he marveled at the number they could dispatch with the little wire swatters.

Ramaiya had the leaflets in his hand and now started to look at them. The doctor pointed out the pictures of some simple screen covers to put over cooked food. On the way back to the office, they passed the doctor's house.

"Oh, you have this screen on your doors and all around the verandah! That is very good. Is it the same kind of wire as in the pictures? With your whole house screened, however, you don't need these small screens, do you? How much did it cost to put it on?"

“ New Occasions Teach New Duties ”

In the midst of the doctor's explanation, his little son, who had been playing on the verandah, caught sight of him and ran out to jump up into his father's arms.

Ramaiya was happy to see the child, and pleased when Bobby returned his salaam and spoke to him in Telugu. He asked the doctor about his family, and told about his own children, and his little grandson, who was nearly four years old.

The doctor was ready to call it a day, and to play with his children for a while. He knew they wanted to take a walk before suppertime. But there was still the matter of the preventive inoculation for Ramaiya and his family, to which the Brahman had not yet agreed. Unexpectedly, it was the little boy who helped to manage this. He started to play a game that he and his older brother liked. Pulling a pencil out of his father's pocket, he poked the latter's arm, and then turned to Ramaiya: “ Don't you want some ‘ needle-medicine ’ too? ”

The old Brahman, amused, entered into the game; and while he offered his arm to the boy, said: “ Oh, you are the *little* doctor.” And to the doctor, “ How does this little chap know about injections? Has he had them? Doesn't

Rats, Plague, and Religion

the screening keep out the flies so that your children are safe from the 'poison fever'?"

"Most of the flies are kept out of the house by the screens, but a few manage to get in when the doors are opened. Sometimes they seem to wait for a chance to ride in on someone's back. We know, too, that there have been flies on all the things that come from the bazaar. We boil our drinking water, for it comes from an open well like yours. Still, because there is so much typhoid fever around, we have all taken the preventive inoculations—even the little boys."

Bobby understood, and he stopped giving his "pretend" injections long enough to show the place on his left arm where he had been vaccinated and inoculated. "Don't you want some *real* needle-medicine?" he urged Ramaiya. "Daddy will give you some. He gives it to everybody."

Partly to please the little boy and partly because he had been convinced by the doctor's argument, the old man said he would take the injection. They went over to the operating-room, and Bobby was a very much interested spectator while the syringe was boiled, and the vaccine made ready.

Ramaiya was a little afraid of these new

“New Occasions Teach New Duties ”

things—the instruments, the syringes, and the whole idea of a person's taking medicine when he wasn't actually sick. But he would do almost anything to please a child. “What, is that all?” He had expected the injection to be quite painful. “I must get Mahalakshmi. She has been right with my wife all the time.”

The doctor asked a nurse to call the young woman. Ramaiya met her, and as he brought her in, he explained that the doctor would give her some medicine to keep away “poison fever.” Mahalakshmi was frightened, but her father-in-law insisted, and showed his own arm. Finally she, too, took the injection. The nurse was explaining more about it to her as Ramaiya and the big and “little” doctors went outside.

Just then a cart appeared at the entrance to the compound. “Another new patient,” thought the doctor, and sent Bobby reluctantly home. “I'm sorry I can't play with you now. You tell John about how you gave ‘needle-medicine’; and tell your mother I'll be home later. Here, son, I may need that pencil.” Then he hastened toward the cart.

Ramaiya was already on his way toward it. He had recognized the man walking beside the vehicle; it was his son. The idea foremost in

Rats, Plague, and Religion

his mind was the inoculation of the rest of his family. So he started at once toward the young man to discuss the matter with him.

Krish-nai-ya interrupted; he had his own story to tell. But first he asked about his mother. When he was told of her improvement, he said: "I'm glad she is better, for my little Ka-ma-lam-ma has been very ill with fever for several days, and I have brought her in this cart. Doctor, won't you make her well, too?"

As it was nearly dark, the doctor asked them to drive the cart over by the women's ward where there was a brighter lantern. As he, too, walked in that direction he noticed the mud caked on the wheels and on the legs of the oxen. There must have been more rain out in their village. "How far did you say your village is from the main road?" he asked.

"About ten miles," Krishnaiya answered. "We started yesterday, but the mud is deep in places where the road goes across the rice-fields, and the cart got stuck twice. It didn't take nearly so long today on the main road, even though we had to travel about fifteen miles on it."

Ramaiya had gone in to get Mahalakshmi. Nine-year-old Kamamma was her daughter.

“New Occasions Teach New Duties”

When the young woman came out, she rushed over, looked at her child, and started to weep. Then she turned quickly to her husband: “And my baby, my little boy? Is he sick, too? Where is he?”

Krishnaiya comforted her. “No, he is all right. I left him with my cousin’s wife. As soon as Kamalamma became ill, I took him over to her.”

The little girl was examined, and then admitted. It looked as if she had typhoid fever, too. The doctor was busy for a while, writing on the chart. Then he went outside, and Ramaiya followed.

“Doctor, you said that the poison might spread, and it has. I’ll explain this whole matter to my son. I am sure he will agree to take the inoculation. But my little grandson, and my brother’s whole family—what about them? Can’t you go back with my son and give the injection to all of them? Of course, before you go, you will have to leave specific orders with your assistants as to the care of my wife and granddaughter.”

The idea of visiting Ramaiya’s village had also occurred to the doctor, but he remembered the mud on the cartwheels. During the dry season

Rats, Plague, and Religion

the old hospital car would make the trip to the village and back in an afternoon, even allowing time for a lecture, as well as for the injections; but not now. Until after the rains were over the car would be out of the question except for trips on the main roads. Going by cart, he'd have to plan to be away three or four days. If it should rain more, though, it would be necessary to walk through mud most of the ten miles from the highway. This would necessitate his being gone still longer.

As Krishnaiya came up and joined them, the doctor asked, "Are there any other people in the village who are sick with this kind of fever?"

"No, sir, all the rest of our family are well."

"But in the other parts of the village? and in the outcaste pallem?"

"I heard that some of the dhobeys are sick—the family who do our washing. Some of the weavers who live near them seem to have fever also. But, of course, I know nothing about those outside the village.⁸

"What about Latchi? Is she still coming to work?"

"No, she stopped coming the day after my

⁸ The "depressed," or outcaste, people live outside the limits of the village proper.

“New Occasions Teach New Duties”

father brought my mother here. We had to send for another woman—and bribe her—to do the work when Kamalamma got sick. The second woman said that Latchi and several others have fever. But you know how those people are. We thought she had probably sold the extra rice we had given her, and had drunk too much toddy.”

The doctor was tempted to reprove this young man for his callousness, but he remembered that Krishnaiya knew nothing of the way in which typhoid is spread. He turned to Ramaiya:

“Do you understand, after our talks today, why it is that the dhobeas and Latchi have probably contracted typhoid fever, too? The dhobeas washed the clothes from your wife’s bed, and Latchi helped take care of her. None of them knew of the danger of infection. We’ll give the inoculation to Krishnaiya. Then you leave him here, and come with me back to your home. We must instruct your family and give them the injection. But it takes several weeks for the vaccine to afford full protection; and we must do some other things. Don’t you see that we must teach the people of all castes, and especially the sweepers and dhobeas, how to protect themselves? What is even more important, we must show them how to be clean according to the new

Rats, Plague, and Religion

rules of health. Flies, and such diseases as typhoid, are not respecters of caste or religious barriers. It was probably some of these dirty insects that brought the disease to your wife; perhaps from some patient of another caste. The people may not believe what I tell them, but they will listen to you, who have been their teacher and a guardian of the old ways and rules. Won't you help me to teach the people in all parts of your village the new and safer ways? You Brahmans, and some of the landowners, can come to the hospital when you are sick. You have carts in which to travel, and money to pay for the cost of treatment. But the low-caste and outcaste people in your village have no way to bring their sick to the hospital; and, even if they had, their ignorance and superstition would make them afraid. We want you all to be saved from these preventable diseases."

"All right, Doctor," said Ramaiya. "We'll start in the morning, and I'll tell the people about taking the needle-medicine. But as for killing flies, you'll have to tell them about that yourself. Be sure to tell them, too, about where to go in the morning. Where can we go? We don't have any of these latrines. Our people would object to them, anyhow; the odor is so bad.

“ New Occasions Teach New Duties ”

With our custom of going out to the field, there is almost no odor—the sun dries it up so quickly.”

“ But that is dangerous, as you know, and there need be no odor to a well-constructed latrine, with septic tank, if the people learn to take proper care of it. We are still having to teach that at the hospital, to the many patients and their relatives as they come and go. I can show you and your people how to build simple, easily-cared-for latrines, if you will persuade the people to use them, and teach them how to take care of them. The people in the village are used to carrying their own water. Our difficulty here at the hospital is that our water-men have to carry water for so many people, and from a well that is so far away.”

They were interrupted by two nurses who came from opposite directions. The boy spoke first: “ Doctor, you didn’t write the orders on the mastoid case. Do you want him to be prepared for operation tomorrow afternoon? Your assistant wasn’t sure. The patient is having more pain now.”

“ Yes, we must do him; it would be risky to wait.” The doctor took the chart and wrote the orders, while the male nurse held his lantern up so that the light would shine on the paper.

Rats, Plague, and Religion

Then the young woman spoke up: "The woman doctor wants you to come and see the woman on whom you operated this afternoon."

"Which one?"

"The intestinal obstruction case. She is restless and vomited just now, and seems weak."

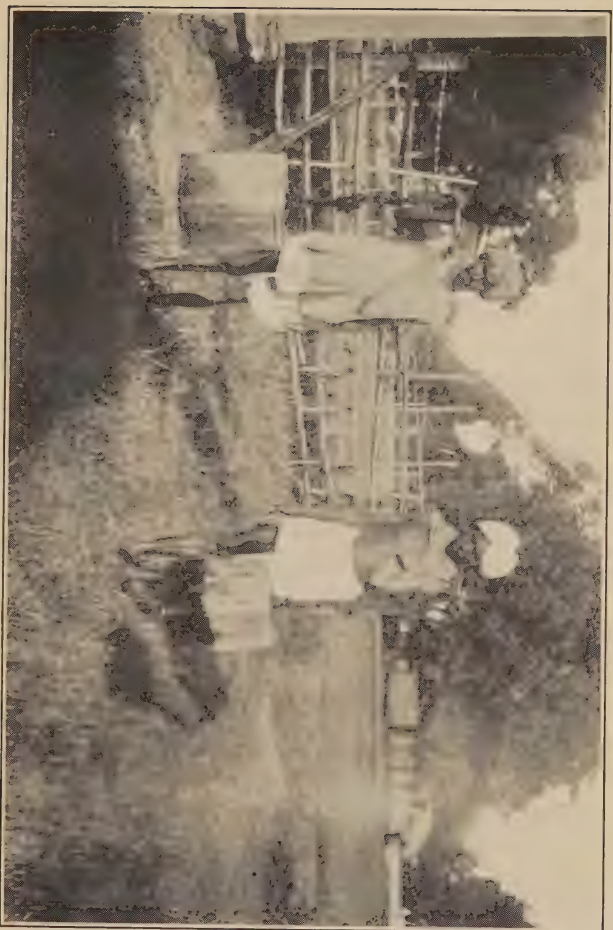
"I'll be right over."

Jee-va-rut-nam, the cook, was standing by, and now saw a chance to put in a word: "Dinner is ready, and madam asks you to come."

"Please tell her to start without me. It may be half an hour before I can come." Then he turned to Ramaiya: "I'll see whether someone on the Government sanitary or hospital staff can go out with you tomorrow. Please wait a few minutes and I will go over there with you."

It took several minutes to attend to the post-operative case, and to adjust her drainage-tubes. The woman had been sick for several days before she came in. She would require a great deal of attention that night and the next day. Then, with Ramaiya, he hurried over to the home of the assistant surgeon in charge of the Civil Hospital, and explained the typhoid situation in the Brahman's village.

"I'm sorry," the Government doctor said, "but this is the time of the big festival up the



The Water-Supply System for the Hospital

“ New Occasions Teach New Duties ”

river, you know. The civil surgeon, the sub-assistant surgeon of the preventive staff, and two inspectors have been up there for some days, taking care of the water supply and sanitary arrangements. We were hoping there would be no cholera this year. But one case developed among a group of pilgrims as they came. The C. S. ordered the man to be isolated; yet in spite of precautions other cases have occurred. To-day I had to send my own assistant and the other inspector. Hence we are cramped even for the dispensary work. But there is an unusual number of pilgrims at the festival. It is a special year. I'm sorry, but I can't send anyone for at least a week, possibly longer.”

As they went back to the Mission Hospital, Ramaiya said: “ Yes, this is the special year for the Godavari River festival. Some of my family planned to go, before my wife fell ill. But, Doctor, can't you come yourself? My little grandson—he's just like your little boy! I am so afraid he will be the next one to get the ‘ poison fever.’ When can you come? ”

The doctor thought of the little grandson, as well as of the dhobeys and Latchi and the other sweepers, so ignorant, and too poor to come to Hanumakonda. Yet he had to look after these

Rats, Plague, and Religion

patients in the hospital. They had trusted him and had been admitted with the understanding that he would care for them. He couldn't postpone that mastoid operation. Then there were those ulcer and stricture cases, being made ready for operation; he would have to do them the following day.

Nor could he send these cases over to the Government hospital. The doctor remaining there was not a surgeon. And if he were, there is no provision for nursing care in any of the Government hospitals in Hyderabad State, except in the capital city; so they can really give little more than dispensary service. The doctors in charge are also responsible for the direction of all the public health and sanitation work of a district as large as Connecticut, having a population of about a million and a half; so they are often out of town. Yes, he must stay and take care of these operative cases. When could he get away?

Perhaps he could arrange matters so as to start with Ramaiya in three or four days. He decided to make the attempt. The trip would probably be mostly on foot, for they would have to push the cart more than they would be able to ride in it. He would plan to spend two or three days in the village. What could he hope to accom-

“ New Occasions Teach New Duties ”

plish in that time? There would be the talk with the elders, and a public meeting with an introduction by Ramaiya, and his own lecture. The lecture could be illustrated with lantern-slides, if he could procure a battery to take with the lantern. Then perhaps they could give three or four hundred inoculations, which would use all the vaccine he could afford to buy for free distribution at this time. The next day, if the rains held off, they could dig the hole for a septic tank, and he could explain to the masons and carpenters the plans for this demonstration unit, and for a fly-house.

Undoubtedly he would be called to see and prescribe for a number of typhoid and other patients in all parts of the village. With the roads as they were, taking patients back to the hospital would be almost impossible. The doctor could feel, however, that he had made a beginning in the program of cleaning up the village that would bear fruit in a reduced incidence of the preventable intestinal diseases. This would be only a foundation; many would not heed; and there would be opposition to the new ideas. It would probably take years to build up a real, effective sanitary system.

This situation ought not to surprise us in

Rats, Plague, and Religion

America, where a hundred years ago sanitation had scarcely begun. Even until recently, in some parts of America, there were laws against having bathtubs. Still later, ordinances forbade taking baths in the winter, and dates were given for "open season."⁹ As for sewers, it wasn't considered polite to talk about such things. Very few of our parents and grandparents either appreciated the efforts of those who established the foundations of our present system of sanitation and public health, or supported them in that work. To those pioneers we owe a great debt, though we seldom sing their praises.

Instead of writing poems and building monuments to immortalize their contribution to public health, we may best show our appreciation of the efforts of the sanitation pioneers by continuing their work of "cleaning up" in the places and the countries where it is now so greatly needed. This will be against opposition—as it was in their day—though also in those countries there will be a few who will offer whole-hearted co-operation, as did a small number here. We cannot expect quick and general acceptance and appreciation, or a ready willingness to take responsibility for financial support of these new ideas

⁹ Cf. Albaugh, *Between Two Centuries*, p. 14.



One of the Hospital Bathrooms

“New Occasions Teach New Duties”

in water supply and sewage disposal. They *are* new in India—and even here not so very old.

2. SOME LEFT-OVER CURRY

“We’ll have to have left-overs today,” said Santoshamma to her husband, as she was preparing to serve their noon meal. “There was just enough wood to cook the rice. The curry left from last night we must eat cold. But with the warm rice, that will be all right, won’t it?”

Abraham agreed, and they sat down to eat in the little cook-shed near the hospital, in which they were staying. The curry—very much like a stew—was composed mainly of chillies, peppers and spicy leaves, but there were a few vegetables in it and some small bits of meat, the first they had afforded in a week. A large helping of rice and plenty of *karum* (peppery heat) in the curry made up, as it usually had to, for the lack of variety. They ate the food with relish, and were far from realizing that in that left-over curry, which had not been re-cooked, were the seeds of death.

Abraham and Santoshamma were Christians. To Indians that would be evident at once from their names. His was, of course, a Bible name; hers was the Telugu word for “joy.” It is

Rats, Plague, and Religion

strange that the Hindus have allowed the Christians to monopolize such a name! They had come to the mission hospital chiefly because they were anxious to have children. They had none. They were taking treatments in the out-patient department and living in a corner of the mission compound. Their home was in a village about a hundred miles away, where Abraham was a tenant farmer. The year before he had been afflicted with a deep festering sore on his hand. Although he had applied various leaves and ointments that were available, the sore had not healed; in fact, it had been slowly getting worse. On the advice of the missionary in that area he had come to our hospital for treatment.

A blood test in the laboratory showed the reason why local applications could not have been successful. His ulcer was merely the outward expression of a disease which had long been in his system and was now beginning to show itself in degenerative changes. When we explained the situation to him, he said that many years before he had contracted a "woman's disease" (venereal infection). Physically it had not bothered *him* very much, but for a long time he had been worrying, wondering whether perhaps his wife's ill-health and their childlessness might

“New Occasions Teach New Duties”

be in any way connected with the sin of his youth. In that frame of mind, the trouble with his hand had seemed to him in the nature of further retribution, especially since the sore had come slowly and had been more disabling than painful.

This illiterate farmer understood very little about disease, from the medical view-point, but he did realize, which was quite unusual in a man of his group and type, that there was a definite relation between his own act *in this life* and his disease. Most Indians consider sickness and trouble to be the result either of something wrong done in a previous birth, or of the capricious anger of some god or goddess. The feeling of his that God, not in anger, but in justice, had provided retribution for his sin was not lessened, but rather increased, when we told him of the many manifestations that syphilis may take, and that it is commonly transmitted from husband to wife, sometimes causing sterility.

It was easier to persuade Abraham to have his wife treated than as if she had not been actually ailing herself. In dealing with venereal disease it is always essential to treat not only the individual patient, but also his family. To neglect to

Rats, Plague, and Religion

do this is to permit renewed infection of the patient as well as the continued spread of the disease. But if the other members of the family seem healthy, it is difficult to explain to the average ignorant villager that a disease may sometimes remain latent for months or years, causing sterility and other serious consequences, yet giving the infected person no pain or other obvious symptoms. In the absence of such symptoms it is frequently impossible to persuade the patient to incur the additional expense of having the rest of his family treated.

To do so, however, is of the utmost importance to a comprehensive public health program. Even in a country like America, with relatively high moral standards, moral practice lags behind moral principle, and the incidence of venereal diseases is high enough to make their control one of our major public health problems. It must be faced more squarely as such by those who have been accustomed to think of it as primarily a problem of morality. Some of these have really worked against effective public health effort because of their insistence, on moral grounds, that such things should not be mentioned in public. On the other hand, those who have thought primarily of the cure and preven-

“ New Occasions Teach New Duties ”

tion of disease should recognize that only through the motives and ideals of morality and religion can public health measures be made really effective.

If this be true of America, how much more is it true for India, where a very different general moral standard exists and the incidence of venereal diseases is higher! Blindness, paralysis, huge abscesses and ulcers, all varieties of pain and suffering, come in their wake. Because of their prevalence, thousands of children are born, only to die early, or live severely handicapped.

When we think of the Christian ministry of healing, a venereal disease clinic is not the first picture that comes to the mind's eye. Yet such clinics, because of the family and other social and moral problems involved, offer more real opportunity than the other departments of the hospital to teach the Christian attitude toward women and children, the Christian ideal of personal responsibility and self-control, the Christian standard of purity, and the inspiration and moral reinforcement that come from the religion of Jesus. Thus venereal disease clinics are a very important part of the ministry of healing rendered in India by the representatives of the Great Physician.

Rats, Plague, and Religion

Abraham had hitherto been very penitent, but hopeless. When, however, his hand began to heal, and we told him to bring his wife so that we might treat them both at the same time—suggesting, though of course making no promises, that if both were properly treated, they might sometime have a child—it seemed to him almost as though God had provided through us a way in which forgiveness might be manifest physically as well as spiritually.

Abraham's ideas about sin, retribution and forgiveness were extremely simple. Yet he was not one who felt that he could accept what he considered the fruits of forgiveness without paying something. He was anxious to do his part. When his hand had healed and he started home he promised to work hard and save so that he could bring his wife back with him for treatment. The hospital charge to him would be made very small, but he had also to plan for the expense of the food, which would need to be purchased for cash in the Hanumakonda bazaar. In his own village, food was obtainable under the usual credit basis, with the yearly settlement when the crops were harvested.

So Abraham went home, told his wife of his own partial cure, and of the hope that she also

“ New Occasions Teach New Duties ”

might be healed of the curse that he had brought upon her. Both saved and planned, economizing in about the only way they could, by having simpler and less food. At the end of a year they had put aside about ten dollars. They were afraid that this might not be enough, but they hoped that somehow the doctor could help them. Perhaps he could find some work for them. He had told them to come in a month or two, and already they had had to wait a year. It seemed best not to delay any longer. So they started out to walk the hundred miles to the hospital, thus saving the two dollars it would have cost to come by train.

Santoshamma was pretty well tired out when they arrived. We could see that she wasn't very strong, anyway, and when we examined her we found that there was not only the venereal trouble revealed in the blood test, but also a chronic amebic infection, and intestinal worms. We kept her in bed for about a week, and while she rested had a chance to give her medicine for the latter two conditions. She was happy, though, when she could be up and around and get her medicine at the dispensary, for that allowed her to do the cooking for her husband and herself. Abraham had not made out very well at this.

Rats, Plague, and Religion

A week or so passed, and Santoshamma had had one injection. Abraham had given part of the money to me when they arrived; the part he kept for food, however, disappeared faster than he expected. So he welcomed the job we were able to give him, repairing some walls. He was happy to be busy and earning his way. Santoshamma was not strong enough to work, as she wished to do, to help pay the cost of the treatment. She took her injections, and did the cooking, and what little marketing was required. All seemed to be going well, until the day when they had the left-over curry. Even that would probably have been all right, had it not been that it was August, the time of moist heat, the middle of the rainy season, when flies are thickest and epidemics of the intestinal diseases are likely to break out.

They finished eating, that noon, about one o'clock. After the customary short rest period Abraham returned to work. When he came back to their little shack at suppertime he found that his wife had prepared food for him, but she herself was not feeling well and did not eat. She lay down soon after, and tried to go to sleep, but about nine o'clock began to be violently sick. She was barely able to reach the door and get out-

“New Occasions Teach New Duties”

side. Not only did she vomit, but a severe purging commenced. Both continued off and on until about two o'clock. Abraham did not at first realize how serious it was, and he did not like to bother the doctor in the middle of the night. But at two o'clock we were called over in a hurry to see her. She had been carried over to the women's ward. Quick action was necessary. Santoshamma was a ghastly sight. One would have thought her dead had not she raised her head every minute or two to retch, painfully, and plead weakly for water. Her skin was dry, she looked shrunk, and her eyes had sunk deep back in their sockets. It was impossible to feel her pulse at the wrist. This was cholera!

Fortunately, the apparatus was ready for giving the saline injection. We had been busy until nearly one o'clock with another similar case. It took only a very few minutes to get the saline warm, the needle into the vein, and the solution running. We had to give Santoshamma about four pints before she was out of danger. After the first half-pint we were able to feel her pulse. Soon afterwards she stopped retching. By the time we had finished the injection, a little before four, she looked almost like her usual self.

This woman had been right on our own com-

Rats, Plague, and Religion

pound when cholera attacked her. The one we had been able to save earlier in the night had come from less than a mile away. She too had been well at noon. There is hardly any disease that is so sudden and dramatic in its onset—and in its cure, if the patient can be given proper hospital treatment. As we poured more and more saline into the flask, and watched it run into Santoshamma's vein, and saw her improving right under our eyes, we thought of the thousands of poor people in India who are attacked each year by this terrible disease and are too far from a hospital to get there in time. There are, of course, other methods of treatment for home care, but they are less effective, particularly in later stages of the disease.

Our work was not finished when Santoshamma was out of danger. The up-to-date physician knows that prevention is more important than cure, so prevention was our next task. The place where she had been attacked was only about a hundred yards from the male ward, which is not screened. The houses of some of our staff were also close by. We knew that the ground in the vicinity of the cook-house would be heavily infected with cholera vibrios, for the discharges from cholera patients are usually loaded with

“New Occasions Teach New Duties”

those organisms. We had to hurry to get the ground covered with disinfectant solution, and then with dirt, before dawn.

Until then it had never occurred to us to be especially interested in the retiring-time or the rising-time of flies. But that morning this constituted one of our major interests. We got the compounder out of bed, to make up the phenyle solution, and poured several gallons of it around, while Abraham held the lantern. Then the doctor held the light while Abraham brought basket after basket of dirt and distributed it over the suspected area. The east was beginning to get light before we finished. Abraham dug, the doctor spread the dirt, and we saw the first flies only after we were through.

Flies are more deadly than tigers. They are responsible for a hundredfold more deaths every year. Some of these dirty insects must have brought the cholera germs to the dish of left-over curry from some place in the town where a cholera patient had been. In the curry the germs had multiplied rapidly, and Santoshamma had thus taken a pretty heavy dose. Abraham had taken it too, for he had eaten the same curry. That is one of the strange things about cholera. Not all those who ingest the germs fall victims.

Rats, Plague, and Religion

In this case Santoshamma may have been more susceptible because of internal ulcers from the amebic infection which had not yet healed.

Poor Abraham! he was a very bewildered and frightened man that night. There wasn't much time to explain things to him while we were treating his wife, but after he knew she was out of danger, and we had told him of the continued peril, he worked eagerly and willingly with us to try to protect the other patients and the rest of the people on the compound.

Whereas for plague it is necessary to remove the patients outside the town, where they can be away from the rats as well as the people, the problem with cholera patients is to keep them from polluting water sources, and to put them where flies will not have access to them or to their excretions. The women's ward at our hospital was the only suitable screened building in Hanumakonda or vicinity. Not all the patients could be persuaded to come there, and of those who wanted to come not all could be brought in time, but we did what we could.

In addition to this, there were two other main methods of preventive work, the disinfection of wells—carried on by the Government staff as soon after the first case had been reported (the

“ New Occasions Teach New Duties ”

earlier ones had not been recognized as cholera), and the giving of preventive inoculations. These, of course, were emergency measures, taken during the time of the epidemic. Prevention of such epidemics awaits the progress of education in and adoption of proper sanitation. It will continue to be dangerous to eat cold foods and left-over curry in India until we have succeeded in sharing the benefits of modern public health knowledge with the people, who are without them. This opportunity, and the responsibility to meet it, comes especially to those who have known the advantages of the newer ways, and have known what it is to live without the recurring fear of sudden death from cholera.

3. UNWELCOME VISITORS

A number of the children in our Hanumakonda Mission School had been in the hospital with amebic dysentery, and several had had to be admitted for treatment of intestinal worms. So we decided to give special examinations to all the children in the school, to find out how many of them needed treatment, and also to give us something of an index of the general incidence of these protozoan and parasitic conditions in our locality.

Rats, Plague, and Religion

On one examination, about fifteen per cent. of the children were found to be carriers of ameba cysts, and some others had active forms; about twenty per cent. were discovered to be harboring round worms, and twenty-five per cent. hook-worms. Several had both kinds of worms, and a few amebæ as well. So we set aside a week-end and arranged for all these boys and girls to come to the hospital for treatment, that we might help them to get rid of the unwelcome visitors—parasites—that were sapping their strength and making some of them dull at their school work.

Some time after school was out, on Friday afternoon, the children were sent over to the hospital. They were to go without food that night, and to take medicine the next morning. We had prepared for them by making ready all the available beds and laying mats on the floor for the rest. I had just finished seeing that all was in readiness when I noticed the two lines approaching—the boys turning to go to the male ward, and the girls coming toward the female ward where I was. All of them looked as if they were going out for a party instead of to a hospital. But the girls in particular caught my attention, for they were all dressed in their Sunday best,

“ New Occasions Teach New Duties ”

and almost all of them were carrying Bibles under their arms. I inquired the reason.

“ Well, if we have to fast, we might as well pray, too,” they said; “ we have come prepared.” Perhaps they thought that if prayer and fasting are effectual in getting rid of demons, they should be even more of a help in the case of internal animal visitors; for most of the children had seen our exhibit of such parasites in the laboratory. But as much as anything else, this coming to the hospital as a group was something in the nature of a new kind of lark for them. The only complaint I heard was from a girl who had been left behind. She was the only one of the older girls left in the dormitory. So she had to do most of the cooking that week-end. It was really a shame, she thought, that she hadn’t had some kind of reason for joining the rest in the hospital!

Fine as any group of children anywhere are these Christian boys and girls in our Mission School. They come from homes in many of the villages within thirty miles of Hanumakonda. Most of these homes are poor, and they have never known a surplus of food. These children, therefore, are readily susceptible to various types of disease—their resistance is low. But they

Rats, Plague, and Religion

are as eager for fun, as hilarious in their games, as American children; and probably more anxious to learn, realizing that among the millions of India, they who can go to school have a rare opportunity.

Able to fast when fasting is necessary, the school children also like to feast when feasting is possible. When they were saying good-bye to us before we came on furlough, they put on a feast for us. They cooked the rice and curry, and then sat down on the floor of their school-room to eat it with us. After the meal they sang songs, and then had some of the usual verses made up for the occasion; these are also sung rather than read. This was the import of the one that stuck most in my mind:

“ We are so thankful to the doctor,
And to the people who sent him to us.
He kept us from getting plague,
He prevented our getting cholera,
He saved us from getting typhoid and smallpox.”

There was no mention of the treatment that many of them had had to have at various times in the hospital, nor even of the vermifuge week-end. Prevention seemed most important to them. We were glad, for it is these children on whom

“ New Occasions Teach New Duties ”

we shall have to depend quite largely for the spread of the ideas of public health in the villages from which they come. They are eager for new knowledge and we crave further opportunity to teach them that they may take on the new duties which that knowledge requires. But they are just children of the depressed classes. What can they do to persuade the older people of their own group and of the upper castes? They can do much more, perhaps, than we realize, if only we can help them and give them support in trying to introduce proper sanitation and a more adequate diet, so as to prevent their brothers and sisters, and their children, in years to come, from having the unwelcome visitors that brought them to the hospital that week-end—for prayer and fasting.

IV

THE GREAT "WHITE" PLAGUES

THE GREAT "WHITE" PLAGUES

1. SHE WANTED TO BE A NURSE

Jo-han-nam-ma was such a fine girl. She had finished the third form (almost equivalent to the American eighth grade) in the Hanumakonda Mission School, and was ready to start nurse's training. It wasn't just that she wanted to be trained to earn her living, though her family was poor. Johannamma's parents and grandparents, also, were Christians, and she had been brought up in the faith of her fathers. Christianity had become very real and personal to her, and she had caught something of the spirit of her Master, who went about doing good. She wanted to express her love for him in service for those who were sick, and she wished especially to be prepared to help the poor women and children who might otherwise be unattended. Even after her marriage, she could serve in this way in the town or village where she might happen to live. (Marriage is a very definite expectancy to every Indian girl.)

She had to delay her hospital training for a

Rats, Plague, and Religion

year so that she might earn some money to help her family. She came to work with us, helping to take care of our young children. How glad we were to have her! Clean, careful, thoughtful, she was willing to do anything. The little boys loved her, too, and enjoyed having her play with them. Even the more menial tasks of caring for children, and the possible twitting which she might receive because of her job as "nurse-maid," didn't seem to faze Johannamma. Because of this, as well as because of her fine spirit and unusual ability, we knew she would make a good nurse.

It is hard for us to realize the accumulated scorn heaped by society upon those whom it has forced to assume menial tasks that are loathsome, and yet necessary. Thus has society in India regarded the outcaste groups, especially the sweepers. As to what they do, use your imagination, and remember that India is a country where not only dust accumulates, but where modern plumbing is almost unknown, and where even the most primitive schemes of sewage disposal have found but recent, and far from wide-spread, adoption. Dirty work, and the necessity to stay at it, coupled with the ridicule of those whose tasks were more congenial, have made and kept



Johannamma, Who Wanted to Be a Nurse

The Great "White" Plagues

the sweeper caste a dirty people. What was the use of being anything else? So the sweepers took on the other menial and loathsome jobs, including the making of leather from the hides of dead animals. As this is rather less objectionable than the other—since all castes use the leather after it is finished—they often call themselves "leather workers." But the "sanitary" job is still theirs. And what is the compensation for this lowly condition through the centuries? Only the chance of being born again in a higher group in society, where it would be their turn to scorn, instead of being scorned!

Perhaps an illustration may help to make this situation clear. Just imagine that we Americans had come in and conquered another people of a somewhat different color and race, and because we had conquered them, forced them to be our servants. To be sure that they kept their place—so that we could keep ours—we limited them to a very few occupations—street-sweepers, sanitary department workers, and servants in field, factory or home. To make doubly sure, we refused ever to eat with them or to allow intermarriage. To make the situation fully comparable with the Indian one, there would need to be added only the details of separate living-quar-

Rats, Plague, and Religion

ters, prohibitions against their handling our food, and a common religious conviction of compensation in another life. Is sweeping the streets an honored profession in America today? And do people continue in that calling if they have a chance to enter some other?

“Sweepers do dirty work, and they are dirty. That is why we cannot associate with them.” That it was mainly what they *did* that laid them open to scornful criticism was not only the rationalization in the minds of those above them, but was also realized by many of the outcaste people themselves. It may have been this that was a factor in the formation of sub-castes among them. Those who no longer had the sweeper-work to do would refuse to eat or intermarry with their relatives who still did it. Certain it is that those who in recent times have been able—because of education or other advantages, and because of the opportunities in new jobs open to those of any caste—to leave the traditional occupation, have not infrequently cut themselves off from their less fortunate kinsfolk. Having emerged from the necessity of engaging in these menial tasks, they have very naturally adopted the common attitude of loathing the work they were formerly forced to perform.

The Great "White" Plagues

Nurses' duties include the handling of bed-pans, and in giving baths, the washing of other people's feet—frequently very dirty feet, for the combination of dusty roads and bare or sandaled feet has its obvious results. It is then not surprising that while there have been many from all classes and groups who have aspired to be doctors or druggists, nursing is not a very attractive profession, either to the caste people, or even to those outcastes whose ancestors were sweepers. In the Christian community of India, parents usually consider sending their daughters for nurses' training only if the girls are not qualified to prepare for teaching, or what is called "Bible work." Pharmaceutical training, for the same reason, is more popular with the boys than male nursing.

The young men and women who have come mainly because their parents or advisers could not fit them into any "higher" calling present obvious difficulties to the institution that attempts to train them to be good nurses. They are eager to pass on the menial but essential tasks to the new probationers ("a good way to initiate them"), to the patients' relatives, or to some scrub-woman. They don't want to be ridiculed, called by the various names which people apply to

Rats, Plague, and Religion

sweepers, no, not even if their grandparents did have to do that work before they became Christians. In that case, as a matter of fact, they are even more sensitive.

There are many, however, whose consecration to their Master is so real that they have deliberately chosen nursing as their profession and have considered even the menial tasks involved as opportunities to serve him. They are faithful and, having ceased to scorn their dirty tasks, they keep themselves clean. Their tenderness and loving helpfulness have blessed many. These nurses have naturally become the teachers of those whom they serve, for their patients have recognized in them a quality of character which they admire but cannot understand; asking, they have heard the explanation: Did not Jesus clothe himself with a towel, as a servant, and wash the feet of his disciples, who, as his followers, would be supposed to bow at his feet? The significance of this act of our Lord's is not lost in India, where it is a common thing for the low-caste person, in addressing his superior to say, "I touch your feet," where an inadvertent touch with the foot calls for a deep salaam of apology, and where one of the greatest insults is a kick, or a blow struck with a shoe or slipper. The in-

The Great "White" Plagues

fluence of these nurses, who have overcome natural prejudice by the Christian spirit of service, has spread out to many villages and its effect is to be seen in the transformed lives of large numbers of patients, who came expecting to have to bribe the menials to do things for them, but remained to receive willing and joyous service, and to find Christ in the lives of those who gave it freely.

It was just such a nurse that we felt Johannamma would be. Moreover, though she was very thin, like most of the Indian girls of her age, she had seemed to be healthy. Even the coughs and colds, so prevalent that year, as well as the more serious dysentery, had not attacked her, and we had hoped that she would have the physique, which so many of our student nurses lack, to stand the three hard years of training ahead of her. Too large a percentage of Indian nurses have poor resistance to infection. Perhaps part of the reason is the fact that, as children in poor families, they have never had enough to eat or sufficient variety in their diet.

One day, after she had been with us several months, Johannamma said she wasn't feeling well. She was extremely tired, she said. Her temperature was taken, and found to be 102°.

Rats, Plague, and Religion

So a careful examination was made, resulting in the shocking discovery that she had tuberculosis, involving both lungs, although she had had no special symptoms that would have called earlier attention to it. She was immediately admitted as a patient to the hospital, and kept there. In general we avoid keeping tuberculosis patients in the wards because of the danger to other patients and the nurses. We are limited in our facilities for isolation. However, in such cases as Johannamma's, it is incumbent upon us to give what care we can, taking all possible precautions. She responded fairly quickly to treatment, with a lowering of the temperature. Because of the serious nature of the disease, and our desire to do all that was possible for her cure, we sent the record of our findings to a tuberculosis sanatorium, and application was made for her admission. Before she could be admitted, she had to wait several months. Why?

In all of Hyderabad State, with a population of about twelve and a half million people, there are no tuberculosis sanatoria. The Government now has a plan for one, and the site has been picked, but no building has been erected. In the whole of South India, having a population almost as large as that of the United States, and a much higher

The Great "White" Plagues

tuberculosis death-rate, the number of special hospitals for the care of this disease can almost be counted on the fingers of one hand. The people in general are poor, and there are so many other things for which the Government must use the tax money. Roads and other means of communication, experiments in animal breeding and new methods of agriculture to promote general economic welfare, the construction and maintenance of huge reservoirs to avert famine when the rains fail, and the general cost of government—these are allowed to push to one side many of the public health needs.

There are two mission tuberculosis hospitals in South India. A small one is run by the Lutheran Mission in Ra-jah-mun-dry. It has difficulty in coping with the problem in its immediate neighborhood and has few free beds for those coming from a distance. The other is the Union Mission Tuberculosis Sanatorium, near Ma-da-na-pal-le. This is under the control of a group of missions, including the Baptist. But the larger part of its support is not from mission funds. They put in only enough to retain control. The major portion of its income is from two other sources: a grant from the Government of Madras Presidency, in recognition of its outstanding service

Rats, Plague, and Religion

and of the paucity of such institutions; and fees from patients who can afford to pay all or part of the cost of their treatment. Such patients come not only from all parts of southern India, but also from the north as well. Many, even of those who can pay, must wait for months for a bed there. As for the poor patients, even when someone can help with travel expenses and make the arrangements, the waiting list for free beds is always long.

But finally word came that Johannamma could be admitted. We arranged for a traveling companion, and sent her along. The forty-eight hours in a third-class compartment seemed long and tiresome, and she was glad to reach the sanatorium.

There she experienced the rigid routine, rest, good food, and fresh air, which are so all-important in the treatment of tuberculosis. She didn't mind the enforced rest, for there was no one there to suggest to her that she wasn't very sick, that her cough was practically gone, or that she ought to be up and around lest she really become ill ("helpful" suggestions often given by loving but ignorant relatives when we try to take care of tuberculosis cases at home!). It was so much nicer for her there, she thought. In the

The Great "White" Plagues

general hospital it was discouraging. Other cases, medical or surgical, would come in to occupy the beds near-by. When they came they seemed so much worse than she was, but they got well and went home while she stayed on. But at the sanatorium everybody followed the same routine. It became a sort of game. There was a new colored ticket to show each step in progress, and to give permission for each new grade of activity. The doctors and the nurses were specially trained in the care of her disease, and had time to train and inspire the patients. And how good the food tasted! Never had she had so much, and such a variety. Of course, even that seemed hard at first—her stomach and her appetite were not used to all that milk—and an egg every day. Why, a cup of milk had seemed a lot for her whole family—when they could get it! When her appetite became adjusted, she felt better, and she really enjoyed eating.

It was difficult, also, getting used to sleeping with her bed "almost outside," when it was so cool. At home they had had to keep the door and window shut at night; there weren't enough bedcovers, and by shutting up the house some of the heat from the little fire that cooked the supper would be kept in. Of course, the

Rats, Plague, and Religion

smoke would get in your eyes, and make you cough a bit, but really it did help to keep the flies and mosquitoes out. However, gradually Johannamma learned to uncover her head when she slept. The rest did it; and she had a net to keep the mosquitoes away.

She wrote of how much she appreciated the good care she was getting, and of each little step in her progress of recovery. So much farther to walk today! But at times the days did seem rather long. She had made new friends, and it helped to have her Bible and a few other books in Telugu to read. Yet she wished it were not quite so far from home, and that letters didn't take so long in coming. She knew that her family and the friends in Hanumakonda were busy and not accustomed to writing letters. And the cost of a stamp would buy quite a little rice. But there were so many hours that would pass more quickly if she had a letter to read that she had not already read many times and answered.

Johannamma stayed at the Sanatorium for about four months. She was much improved; she knew she was, and the examination showed it, too. The disease seemed to be arrested. To be sure, they would like to have kept her longer. But so many were waiting for her bed.

The Great "White" Plagues

They had taught Johannamma much about taking care of herself. At the Sanatorium all the patients were taught as well as treated. And they found this girl, who wanted to be a nurse, most ready and willing to learn, not only how to take care of herself but also how to protect others from getting the disease. Tubercle bacilli had been found in her sputum, so she willingly assumed the carrying out of the extra precautions necessary when she knew what that finding meant to her and to others.

How happy she was to go home again when the woman came for her! Her little tin trunk was ready, and she received her final instructions. *No work and no study*, especially not nurses' training, for at least a year; and *good food*; with enough rest and restricted activity. Yes, she knew, she had learned at the Sanatorium. She thanked all the doctors and nurses, said good-bye also to those who were still in bed, and started home.

Johannamma was eager to see her mother, and went first to stay with her for a while. Her mother rejoiced that her daughter looked so well, had gained weight, and seemed not only cured, but stronger than she had ever been. The mother had been skeptical when they told her

Rats, Plague, and Religion

that Johannamma had tuberculosis, for the word used in Telugu is one which means what we mean by consumption in a rapid and late stage. The only people the mother had known to have consumption were very ill, and died soon after. No, she couldn't have had consumption—just look at her now! She was happy to have her daughter home again, so she was especially careful as she prepared the food, and was glad she had been able to get a little mutton to add to the curry for the occasion. But Johannamma's mother was a widow and poor. Soon they had to return to the usual diet, of Kaffir corn, with rice—occasionally—spices, vegetables, and now and then a little meat. The girl realized how things were. She had grown up on this diet, and she knew her mother thought she was cured; she did herself, she felt so well. The doctor, though, had been very insistent in his instructions, and had explained why. Yet what could she do? Perhaps she could get more adequate diet later on. She didn't complain, and gradually took over the house work, for her mother sometimes had to work outside.

Then after a few weeks she caught cold. She began to cough a little, and there was some sputum. But everybody gets colds. However,

The Great "White" Plagues

when it stayed on for a couple of weeks, she was troubled about it. So she was glad when the opportunity came for her to go to her sister's home in the city. They planned for her to rest more, and hoped to give her a better diet. We had written to them, urging the necessity of care for Johannamma, for many months to come. So they sent for her. It would be pleasant, they thought, to have someone at home while they went to work. They were both teachers.

Johannamma did rest, and they bought milk for her, and the cold went away. But they couldn't continue to buy extra milk. There were three or four little children, besides the three adults, and the combined salaries of the two teachers amounted to only fifteen dollars a month. Just a quart of milk and two eggs for Johannamma each day would cost between four and five dollars a month. So when the cold was gone, she didn't get the milk and eggs any longer. Johannamma wanted to keep well so that some day she could enter training, but she wouldn't take that much for herself when she couldn't be working and the children did need so many things, if they were to grow up well and strong. She tried to rest, and her sister and brother-in-law urged her to do so. Yet after

Rats, Plague, and Religion

they had gone off to their schools the house must be put in order. And the children must be amused, or they might run out into the city streets where there were so many cars. So Johannamma played with them. She felt quite well, now that the cough was gone, but she remembered to be careful not to get too close to the children or to hold the baby near her face, when she had to pick her up.

When the hot season came again and her sister's school was over, Johannamma went once more to see her mother. About a month later, while we were in the mountains, we received a letter from the sister. The girl who had wanted to be a nurse, only eight months after returning from the Sanatorium had been taken with what seemed to be a sudden attack of some serious illness, with fever—probably tuberculous pneumonia—and in a couple of weeks she was dead.

She had not been able to carry out those instructions, though she had tried hard to do so. What a wonderful nurse Johannamma would have made! She was not the only one to die of this terrible plague. That same day, and every day, hundreds of others in India died of tuberculosis.

The Great "White" Plagues

2. CANDIDATES FOR THE PROFESSION OF BEGGING

Because his teacher in the Mission School had a watchful eye to discover anything wrong with her pupils, Samuel was sent over to the dispensary for examination when the patch on his leg was fairly small. Even so, he had had it for two or three months. The annual physical examination of the school children had been about six months before. It had not bothered him, he said, and he hadn't paid any attention to it, except to notice that within the circle, which had been slowly increasing in size, the skin was a little lighter in color. One day he had noticed that when he touched his leg there, there was a sort of tingling sensation. Some days later, when he thought to try it again, he couldn't feel the touch of his hand at all. But there had been absolutely no pain. He was very healthy. He forgot all about it, until the teacher noticed it. The patch was perfectly anesthetic. A pin prick drew blood, but did not give the boy either pain or even a knowledge that he had been touched. Patches like that are produced by a certain type of leprosy.

A leper in our boarding school! Yes, but that

Rats, Plague, and Religion

was not so surprising in view of the number of lepers in practically every town and village of our section of the country. Of course Samuel had to be removed from the school. His parents could not afford to send him to the only leper hospital in Hyderabad State—the one at Dichpal-li, over a hundred miles away. There is no compulsory isolation of lepers, so that taking treatment for this disease is purely voluntary. If we sent him home, asking his father to bring him to the dispensary where we treat other lepers, we were afraid that he wouldn't get the treatment regularly. The father had to work and would find it hard to understand the importance of persistent and prolonged treatment for a little patch on his son's leg, that didn't hurt the boy at all. Leprosy in its later stages is commonly recognized, but not when there is only one small area of discoloration.

Because we were so anxious that this promising boy should receive adequate treatment, and because he wanted to keep up his studies, we decided to keep him at the hospital. If a leper were kept in a hospital in America, the other patients, as soon as they found out about it, would promptly leave. But it is not so in India. There leprosy is too common.



Men's Ward, Hanumakonda Hospital

The Great "White" Plagues

We gave Samuel a bed in a corner of the male ward veranda. Some of his schoolmates brought his food and poured it into his separate dishes, and kept him in touch with the progress of his classes. After a few months of treatment with injections, and examination of smears from the nose to make sure that he was no longer infectious, we allowed him to go back to school. Later, when the patch had cleared up, he returned to the dormitory. Apparently he was cured, due to the fact that we had been able to start the treatment at a relatively early stage and continue it regularly.

But come with us down to the Hanumakonda bazaar, or along almost any of the much-traveled roads. Who are those people squatting in the dust, just a little out of the way of passing carts and pedestrians? They hold out their hands, and call out to us as we pass. Their cry is not "Unclean! Unclean!" as it was in Bible times, nor are they motioning us away; they are just pleading for alms.

These are the lepers that are recognized as such, and that excite great pity. That is the reason why they are where they are, beside the road. Because these poor creatures are pitiful, sometimes grotesque or terrible—leprosy makes

Rats, Plague, and Religion

people that way, in the late stages—they qualify for the profession of begging. There are several classes of mendicants in India: holy men, fakirs, entertainers of various sorts, and those with obvious physical infirmities. Lepers make up quite a large proportion of this last group, which also includes “the lame, the halt, and the blind.”

Many of these lepers not only beg beside the road but make their home there also, in huts or hovels of various kinds. Usually it is not because they have been cast out from their village that they are thus isolated from their former homes; they have taken up this form of life as a means of livelihood, which, poor though it be, is usually available where people pass by. But before deformity comes to close their previous occupations to them, these lepers live and work with their families and neighbors. Of course during that period of close contact the disease germs have plenty of opportunity to spread, and find new victims, in whom it may become manifest only months or years later.

Our present knowledge requires earlier recognition of the disease, if satisfactory results are to be obtained from treatment. The disease progresses slowly, and often with relatively little discomfort. The usual period of treatment must



Two Lepers

The Great "White" Plagues

exceed the period from first recognition until treatment begins. Not uncommonly a leper comes for treatment a year after the first sign appeared. It is very difficult for such a person to take a course of injections twice a week for a year, especially if to get them he must travel ten or fifteen miles, or farther. At that stage, he must work if he wants to eat. Only later does he become a candidate for the profession of begging.

Nevertheless, the situation is far from hopeless. When treatment can be taken out to the places where the lepers live, many of them can be given the injections regularly, and a high proportion of the early cases can be cured. Even the late cases can get decided relief.

"Lepers are cleansed"—early cases cured;
"The dead are raised up"—are not these poor beggars dying and dead while yet they live?—
"The poor have the gospel preached to them"—and new hope, new life, and great joy come to those who accept it even when it brings no promise of physical cure.

V

MOTHERS AND BABIES

MOTHERS AND BABIES

1. STIFF NECK, A RUBBER TUBE, AND A HUNDRED RUPEES

The cart was closely curtained and the women inside it wore the heavy *burgha* (veil) for additional protection from the chance gaze of the men passing by. The man who walked beside the cart was obviously a Mohammedan; his red fez and long coat would have been sufficient evidence of his religion even had one not been able to tell from his features and bearing. The cart turned in at the dispensary gate, and drew close to the *zenana* entrance in order that the women might more easily gain the seclusion of the examining-room. They had to help one of their number down from the high cart and up the steps, while the man who had accompanied them walked around to the main entrance. The cart driver unhitched the oxen and put them to graze, settling himself under the shade of a tree to rest while he waited for his employer's return.

In her long, all-enveloping *burgha* it was impossible to tell anything about the patient except

Rats, Plague, and Religion

that she was ill. But once inside, she removed the hot veil and sank gratefully down on the floor to wait her turn. The room was full, but Doctor Andrews, our Indian woman physician, came at once to the group, for she could see that the woman was in need of immediate attention. The relatives answered her questions. The sick woman's name was Sha-di-Bee-be. Yes, a Mohammedan. Her age? They were not sure, perhaps twenty-five. Yes, they were from Hanumakonda, near the hill itself. Her husband? Ab-dul Ra-sul, a clerk in a Government office.

As Doctor Andrews continued her questioning she began her examination of the patient, and at once realized the serious nature of the woman's condition. Her baby had been born at home ten days before, with the help of a midwife. Three days later she began to have fever; they had rather expected that, puerperal fever is so common that it is regarded as almost normal. The family had not realized that there was any unusual difficulty until she began to complain of a sore throat and later of a stiff neck. This morning, however, she could scarcely open her mouth and seemed to find difficulty in swallowing, so the relatives grew worried and brought her to the hospital. The history confirmed Doctor An-

Mothers and Babies

draws' fears. This was tetanus (lockjaw), and she could not feel very hopeful of the woman's recovery. Infection from the dirty hands of an ignorant midwife was the cause, as it is of so much of India's needlessly heavy maternal mortality.

In the meantime, Abdul Rasul had been talking with me about his wife's condition. He seemed quite willing that I should examine her, too. (In such a crisis *purdah* rules are often ignored, at least so far as the missionary doctor is concerned, though they still seem to apply to the Indian men doctors.) My examination confirmed Doctor Andrews' diagnosis of tetanus. Then we faced a real problem, one of the tragedies which missionary physicians must so often meet. The serum, which offers the only possible hope for cure of tetanus, is expensive, even in America, and in India much more so. The amount necessary to treat Shadi-Beebe would cost a hundred rupees (\$40), and we could not guarantee that it would save her life. We told her husband about it.

"But, Sahib, I am a poor man; you know my condition. How can I pay anything at all? Is this not a charity hospital?"

"Yes, this is a charity hospital," we assured

Rats, Plague, and Religion

him, "and very few people pay the full cost of treatment. You will not be paying for the care of your wife, the services of the nurses and doctors, the room, or even all the medicine. What we ask is that you pay the cost of the serum, and provide her food. That we must have. Our hospital is poor, too, and every one must pay something. How much is your salary?"

"Twenty-five rupees a month, Sahib, and I have so many expenses. See, Doctor Sahib, here are ten rupees. Won't you cure my wife for that? It is all I have. That amount ought to buy her much good medicine. Surely you will make her well for ten rupees!"

Again and again we told him that the cost of her treatment would be at least two hundred rupees, and that he must give the hundred for the serum; and explained matters as well as we could. He tried to bargain for a while, offering a little more each time, and even made a final offer of thirty rupees; but a hundred he would not pay. Just for a woman! Of course not! Perhaps, if we could have promised recovery, he might have agreed, but that we could not do.

Our hearts were heavy as the woman was helped back into the cart, the curtains drawn close

Mothers and Babies

again, and they started home. Her face had looked so piteous, and her husband was so sure that we were unwilling to help her, and that our fees were exorbitant. Yet, what could we do? One hundred rupees is one-third of our month's appropriation from mission funds; that amount does not even cover salaries, and fees paid by the patients must be depended on to pay for medicines, supplies, food for the nurses, etc. Could we afford to give a hundred rupees' worth of medicine free to this woman so that she might have a fifty per cent. chance of life, and then have no money with which to pay salaries, and have to turn away many whom we could more surely help? This heart-breaking choice is one we have to face all too often. In this case, however, the story has a happy ending.

The next day Shadi-Beebe was brought back. This time it was her father who accompanied her. Her husband's love might not be sufficient, but her father could not bear to let her die without at least trying to save her. He had little himself, but he had sold some jewelry, and borrowed the rest to make up the hundred rupees. He pressed this upon me, after bowing low and touching my feet, with an urgent plea that I promise to cure his daughter. Another day of

Rats, Plague, and Religion

the swift, sure progression of tetanus infection had passed. We had little hope, and hardly dared accept the old man's money. We had to tell him that she had small chance of recovery. But he urged us to use the medicines at once.

The Mohammedan woman was already beginning to have convulsive seizures, and her jaws were more tightly locked than the day before. Hurriedly an isolated room was made ready for her, and, with a prayer in our hearts, we gave the injection of the expensive serum. Then, to control the convulsions, an anesthetic, and later, sedatives. She was greatly in need of nourishment, and somehow had to be fed. Since she could take nothing by mouth, we had to feed her by a tube passed through her nose. As often, we lacked the right equipment. A catheter, however, proved to be an acceptable makeshift for a nasal tube, and Miss Robbins, our American nurse, and I took turns giving the feedings of milk and water, every two hours. For a day or two Shadi-Beebe's life hung in the balance; the convulsions still came at intervals, if we stopped the sedative doses, and the jaw remained tightly locked. Then gradually came improvement, but she had been in the hospital more than two weeks before she could swallow and the nasal feedings

Mothers and Babies

could be discontinued. And another four or five weeks went by before she was well enough to go home.

Shadi-Beebe learned much from her long stay in the hospital; how much perhaps we may never know. But at least, she returned to the hospital for her next confinement, and found out for herself how much easier and safer it is to be cared for cleanly and by a trained physician in a hospital, even one so meagerly equipped as ours.

2. TWENTY MILES IN AN OX-CART

Bumpity—bumpity—bump! The ox-cart was jolting slowly over the ridges between the rice fields. The road would have been much longer than this short-cut, and almost as rough. The high old two-wheeled cart swayed precariously as they went over the bumps; but always managed to right itself. The young woman lying on the floor of the cart groaned anew with each jerk and jolt. She motioned to one of the women squatting beside her, "Oh, can't we go faster?"

"Not much, little sister. You know you can't make oxen move fast, especially when there is so far to go. Pit-chai-ya is doing his best, you may be sure. Soon we shall reach the main road."

Rats, Plague, and Religion

A spasm of pain distorted the face of the girl, making her look older than her seventeen years. The four or five other women crowded in the cart shifted their position a little as she writhed in agony. They made little murmurs of sympathy. But what could they do to help her? They were all members of the Ko-mar-ty, or merchant caste, and relatives of little Rut-nam-ma. Their caste prevented them from helping a woman in labor, even one of their own. Moreover, none of them knew anything to do for her, had they been willing to break caste. Perhaps if her mother had been living it might have been different, but she had died four years before, when Rutnamma's youngest brother was born. Po-lam-ma, the mother's sister, thought of this now, and wished that they had somehow managed to bring the midwife along.

It was really the midwife who had suggested that they take the girl the twenty miles to the Mission Hospital in Hanumakonda. Rutnamma had been in labor there in the village for almost two days; and, in spite of frequent examinations, the midwife could not manage to hasten the labor or discover the cause of the delay.

"Of course," she defended herself, "it is her first baby, and a first labor is always longer. I

Mothers and Babies

thought surely she would be all right. But now, I don't know. You would better take her to the Mission Hospital at once. They say that the doctors there have delivered babies after even the best midwives have failed."

They had demurred a little at the thought of the long journey, but finally decided to ask the men of the family for permission. Sun-de-rai-ya was inclined to refuse, but Naga Rut-nam, the girl's uncle, knew someone who had once been a patient in the Hanumakonda hospital, and felt that it might be worth while to send this little niece of his. There was an Indian woman doctor at the hospital, he assured them. His recommendation carried weight with the others, for he had had some education and been away to the city.

Thus it was decided, and the cart was made ready, as it grew light. Rutnamma walked out to the cart, but the women had to support her, and even then she almost fell as they helped her into the high old vehicle. Polamma and the other women clambered in. Each had some reason why she must go along. The cart was full before the midwife came out to join them.

"There is no room. You won't be needed at the hospital. Never fear, old woman. You will

Rats, Plague, and Religion

get your rice and the new sari we promised." The women scarcely thought of Rutnamma; they were filled with eagerness to be off. After all, one doesn't often have a chance to go to Hanumakonda and see the town bazaars. It would be a pleasant change in their lives. They were quite willing to be jolted along for twenty miles, even at the ox-cart rate of two miles an hour, since at the end lay the new sights and thrills of the town.

However, as the miles wore away slowly, they became more aware of the young girl's suffering. Her labor was obviously going along more quickly now. But, unable to help, they murmured words of sympathy and encouragement when she was restless or cried out. When she was quiet, between the pains, they returned to their gossip of village affairs. Gradually the girl's groans became fainter; she seemed to be in a sort of stupor. They tried to rouse her, thinking the stupor might be a sign of approaching death, but then she only screamed afresh.

At last they were in town. It was growing late in the afternoon, but it was not yet dark, and the women, peering from behind the closely drawn curtains of the cart, could see the High Court buildings and the Normal School. Po-

Mothers and Babies

amma directed the boy who was riding in front with the driver to run ahead and prepare the doctor for their arrival, for even she realized that something must be done quickly if her niece were to live.

It was a Sunday afternoon. The dispensary was closed, but the nurse who was there getting the medicines for her ward saw the little boy and heard his story. She directed him to have the cart driven over to the women's ward while she summoned us. One look at the woman showed us her serious condition, but we were shocked on closer examination to find that the baby was already partially delivered. The head had been born—how long before we could only guess, for none of the women seemed to have been aware of this. Hurriedly we called for a stretcher and carried the girl into the operating-room. The remainder of the delivery of the already dead infant was comparatively easy, but the young woman seemed to be suffering from severe shock, and grew so excited that we found it necessary to keep her under chloroform for a while, until the various treatments for shock would begin to take effect.

Rutnamma lived, but weeks of fever, due to infection at the hands of the midwife, left her

Rats, Plague, and Religion

weak and listless. It was nearly two months before she was well enough to go home. And the huge fistula caused by the long and difficult labor, and complicated by the difficulties of the journey, left her internally crippled for life.

3. "AYYO, ANOTHER GIRL"

The doctor had just finished helping a young woman bring a baby into the world. She had been in labor quite a time before coming to the hospital. It had been a hard struggle, but finally the child was born. It was a splendid healthy girl, showing no apparent ill-effects of the hard labor. The doctor was happy, and he wanted to tell the mother what a fine baby she had. But the woman was still asleep, under the anesthetic, so he went outside to congratulate the father.

That good man was taking care of a little girl, of perhaps two years. His affection for her was obvious. She was entertaining the group that had gathered around her father, and was receiving from him all the attention that might be expected from an indulgent parent for a first, and up until today, an only child. The doctor told him about the new baby and quite enthusiastically described her fine, healthy appearance. But the father answered with only one phrase:

Mothers and Babies

“Ayyo, another girl!” The others joined in commiserating the father, using the same words.

A little later, the doctor was beside the young mother when she awoke. The first question she asked was: “Where is my son?” He told her that she had a very fine baby, but that it was a girl. Immediately she began to cry, and from crying drifted off to sleep again. Even in her sleep she continued to murmur the same lament: “Ayyo, ayyo, another girl!”

The doctor was called just then to see another woman, in the surgical ward, who was having some pain. She had a severe pelvic infection and was having a pretty stormy time of it. The doctor asked her about her trouble, and she told where her pain was, but went on to repeat the plea she had made before: “Doctor, please do something so that I can have a child. I must be able to have a son, or my husband will have to take a second wife. The family have already made some of the arrangements. But I do so want to be the mother of a son.”

In a society that is founded much more upon family and caste continuity than upon consideration for the individual, it is not surprising that the barren wife, as well as the rest of the relatives who make up the joint family, should join

Rats, Plague, and Religion

in picking another wife for the husband, in the hope that there may be children, but especially sons.

Why is it that sons are so much desired? The father of the two little girls loved his first daughter. He would undoubtedly come to love his second girl in much the same way. But he and his wife and his whole family were disappointed. They had expected and wanted a son. It is not merely that sons are necessary to continue the name and to inherit the family property, and that it is often necessary to give a dowry for the marriage of daughters; there is something else that comes closer, especially in the lives of the poor. It is the question of who will care for the parents in their old age. In countries like America, where free choice for marriage is the usual practice, there are many young people left out. Perhaps more commonly than the sons, married or single, or the married daughters, it is the unmarried daughters who care for their parents when they are ill and when they grow old. Certain it is, too, that the married daughters take over this function as frequently as do the married sons.

But in India, as in a number of other countries, in accordance with custom and therefore

Mothers and Babies

with law, at marriage the daughter ceases to be a member of her father's family. If she takes care of parents when they get along in years, it is the parents of her husband whom she supports, even if he is dead. Furthermore, not only are practically all marriages arranged by the parents, but all the arrangements are made for all, almost without exception. Practically no girls remain unmarried, except those of the temple-girl group. Even if a girl be blind or deaf, disfigured or mentally deficient, still a marriage is arranged for her, though, of course, at a considerable increase in the dowry required. Marriage of practically all young people, and at a very early age, has been one method India has used to attempt to solve the moral problem of youth. With all the girls leaving the home and family, almost without exception before the age of twenty, it remains for the sons, and their wives, to look after the parents in old age. So a little girl at least starts with something of a handicap, if she is born in place of the hoped-for boy.

4. A CAKE OF SOAP AND A PAIR OF SCISSORS

Miss Stoudenmire was on a tour, visiting some villages with one of the older Bible women, and as was their custom they stayed the night in the

Rats, Plague, and Religion

home of the Christian preacher. He and his family were glad to have her, though putting in a second bed rather crowded their one-room house. The bed was a nice new string-and-plank one, borrowed for her use from one of the farmers up the street.

It was in the early evening that a woman came to the preacher's house and asked for "the missionary lady." She wanted to tell her that over in the caste part of the village there was a woman in labor who had been having pain all day. The family wished the missionary to come to see her. The midwife had been there, but even she was getting worried because the baby was so slow in arriving.

News travels fast in an Indian village. Miss Stoudenmire had come in only a little while before, and had not advertised her coming. She was not a nurse, but this was not the first time that a young woman missionary had been faced with a call of this kind. It is assumed by many of the villagers that the foreign teacher, being a woman, must naturally know something about this as well as other problems of women. Perhaps from that village some woman in a terribly serious condition had been sent to the hospital; or maybe a missionary nurse had at one time



An Old Christian Preacher

Mothers and Babies

visited there. Whatever the reason for this summons, it presented to Miss Stoudenmire almost a major crisis. She was neither nurse nor doctor, the sight of blood nauseated her, and she had never seen a baby born. Nevertheless, like so many others of those who have come to preach and have stepped aside to meet a human need, she went to see what she could do for the woman in pain.

She took the Bible woman with her. It was fortunate that she did, for Boo-cham-ma was the mother of several children and quite experienced in the ways of village people. The house to which they were taken was like so many other Indian village houses. High mud walls surrounded what might be called house and yard together, for some of the rooms had roofs and some did not. The farthest room in, which was the one having the least light and, at this time, the most people, was where the poor young woman was lying in her pain. Faced with the realities of the situation, Miss Stoudenmire realized more keenly her inexperience and was distressed at her own inadequacy to meet the demands of the occasion. However, her practical eye saw something that even she could do, for she was horrified when she realized that the dis-

Rats, Plague, and Religion

hevelled dirty woman squatting on the floor by the bed was the midwife waiting in attendance. She had never studied obstetrics, but she did think that such dirty hands and such long finger nails must be not only unnecessary to the practice of this woman's profession but even a definite danger to the young mother. She asked the woman why she did not wash her hands.

"What a peculiar question," thought the midwife (and all the rest of the women). Of course, she washed her hands—everyone does—and usually took a bath, before preparing or eating her food, and before going to the temple to offer a sacrifice—before doing any of the "clean" things. But the "dirty" things—who didn't know that the proper time to take a bath is after doing them, and before starting the things that are "clean"? You couldn't eat with your family—to say nothing of preparing their food—if you didn't wash yourself properly after going out to the fields in the morning. The fields, and even the ditches or street drains, are used as public latrines in the usual Indian village or town. You had to be especially careful to wash well after touching something or someone dead, and after your monthly period, or after you had had a

Mothers and Babies

baby, or had helped someone else who was having a baby. Didn't everybody know that it took longer for bathing and cleaning up after a childbirth than it did for almost any other of the unclean things? Did you put on your new sari, and get out all the new bed clothes when you were going to have a baby, or were going to help some other woman to have one? Of course not. They would just have to be thrown away or burned. Nobody would wash them, certainly not the dhobee. It was a lot more sensible to use all the dirty old cloths and rags that had been saved for just such an occasion. Then why wash yourself, even wash your hands, before helping a woman in labor? ¹

Could she really have meant that? Oh, of course she was white. It is said that many of these foreigners don't take a bath before they eat. Didn't Soob-bai-ya say that one of their ser-

¹ If the reader has difficulty in understanding the thinking of these village women, let him consider the taboos of uncleanness that make up a large part of their ceremonial and religious background. These are the taboos that have so markedly affected the life and position of women through the ages, and therefore, necessarily, the life and health of their offspring. Very similar fundamental conceptions have been operative in many other countries besides India. Examples may be found in the fifteenth chapter of Leviticus, where one may read the rules prescribed for "purification" after childbirth. Other functions of women, and relations with her, have been considered as defiling. That which was *ceremonially* unclean would naturally remain *actually* unclean. How this has followed us along, until recent times, even in the West! In Europe and America, for example, it has been a terrific struggle during the last fifty years to get the same standards of cleanliness and sterility applied in obstetrics, or midwifery, as are accepted in surgery.

Rats, Plague, and Religion

vants had told him that the white people wash their hands *after* they eat, in a little basin? (Finger-bowl.) Perhaps they wash themselves *before* they do unclean things instead of *after*.²

That missionary lady seemed quite young. How many children could she have had? What, not even married! Didn't she have any relatives to arrange her wedding, even if her father was dead? Well, that explained why she didn't understand much about this matter of childbirth.

[While some of this had been going on in the mind of the midwife, and the rest had been the subject of interested conversation among the women present, Miss Stoudenmire had been searching for some soap. Failing to find any, she had hurried back to the house where she was staying, to get some of her own. In Indian village homes, our type of soap is rarely found, for they have the soap nut, which has practically the same effect on water; they also use meal of various kinds. The use of these is about like that of bran, or corn-meal, commonly used in the West for hand-scrubbing before the introduction of special scrubbing and cleansing powders.

² To an Indian, who almost always washes his hands in the stream of water falling from a vessel, or from a pump, the putting of the hands *in* a basin or bowl seems a rather dirty way of washing them. For are not the hands taken from dirty water by our method, and from clean water, by theirs?

Mothers and Babies

Now the Bible woman had had a chance to answer the questions of the other women, and to explain a few things about the foreign ways. Boochamma told them that she understood that in the country from which Miss Stoudenmire came the parents don't arrange for the marriage of their daughters, and that quite a number of young women don't marry at all. She couldn't tell much about this; she didn't know. But she thought that they must live with and serve their families, "like our widows, you know." Some of them actually chose not to get married, even though they had the chance. Boochamma shared a little in the wonder at this, for in the matter of marriage customs her background was not so much different from that of the other women.³

The Bible woman went on to say that she had heard that a number of these foreign young

³ Among the Christian community, as in other Indian families, marriages are usually arranged by the parents or grandparents, uncles or aunts, and practically all young women are married. To us, with our American background, the large number of happy families in all the different communities, Hindu and Mohammedan as well as Christian, that have been started by arranged marriages causes considerable surprise. In recent years, a few of the young people, especially among the more highly educated, have married according to our Anglo-Saxon scheme. Some have been very happy, but many of these matches have been disappointing, largely of course because of the great weight of opposition accorded to those who break away from long-established custom.

A few such tragedies are bound to happen. These disappointments, plus the well-advertised divorce situation in our own land of free choice, and the motion-picture presentation of what is supposed to go on in America, have made a great many thoughtful Indians skeptical as to the advantages of our system.

Rats, Plague, and Religion

women do not get married because they want to devote their whole time to teaching, nursing, or some other such work; and that some engage in religious work, in the service of God, doing——

“Oh, yes, like our ‘servants of God’?” interrupted one of the women.

Boochamma was disgusted at the question. She knew, as they all did, that the “servants of God,” the only large group of unmarried women in India, have not only their temple functions in religious ceremonials, but also serve as what we call prostitutes. She resented the implied slur on the young women missionaries with whom she had worked, whose high character she knew. But she was patient, and explained that her God was different from the gods of Hinduism, and that these women who had devoted their lives to his service, and had come all the way from a far country in that service, spent their time teaching people about God, starting and conducting schools, and taking care of people when they were sick.⁴

⁴ Many of our young unmarried women missionaries have been misunderstood, or even insulted, by those who have not yet learned of this difference. Single women missionaries have many problems. Even in America, nurses or social workers, or in some communities even teachers, have been faced with similar difficulties. Yet one of the splendid chapters of missionary history concerns the contributions made by single women missionaries, despite their special difficulties and handicaps. Certain opportunities have been theirs, too, which were not open to others, and no student of missions can fail to recognize the indispensable service they have rendered.

Mothers and Babies

Boochamma had meant to go on, and to tell them more about God, and about Jesus who had healed the sick; but the young woman on the bed was groaning more now, and her mother was getting anxious. "Where has the lady missionary gone? Isn't she going to help?" The mother had been outside when Miss Stoudenmire had asked if there was any soap in the house, and had left to get some. When the Bible woman explained, she asked: "Do these foreign ladies always use soap to help women to have their babies more easily?" She wondered if it was some new medicine, which they called by that name, or was it one of those queer-looking lumps, which she had seen in the bazaar? Just how could they be used? She had missed the discussion about hand-washing.

This gave Boochamma an opportunity to tell them how, in the mission hospital, everything was made clean before the delivery of a baby, with freshly laundered clothes for mother and child. At a delivery they used only clean towels and things which had been boiled. She said that all those who were helping washed their hands with soap and water. Consequently, many of the mothers had a very easy time, and those who

Rats, Plague, and Religion

came in early in labor seldom had any fever afterward.

This sounded strange to the midwife. She was still skeptical about this washing business. What could this young missionary know about having babies, if she hadn't any? She herself had not started to be midwife until she had had six! But this case seemed a difficult one; the young woman had been having pains since the night before. Why not try something new?

So when the soap came she offered no objection. The bright, shiny scissors that Miss Stoudenmire had in her hand made her wonder. "Do you suppose she does know something, after all, and can show me how to take care of this difficult case?" Thus ran her thoughts, as she tried the new way of washing her hands. The result was not very remarkable. Miss Stoudenmire decided to show her how, and thoroughly scrubbed one hand and then the other. Then she took up the scissors.

The poor midwife was surprised and disappointed at the immediate use made of them. But she was still hopeful, and submitted while the young missionary carefully trimmed her fingernails, which had been very long. There was another hand-wash. This time the woman did a

Mothers and Babies

pretty good job of herself. That piece of soap certainly made nice lather; and her hands felt so pleasantly clean! She thought she would like to keep the little cake of pink soap.

Miss Stoudenmire made her promise to wash her hands again before the baby came; and every time she had to do anything for the mother; and then told her she might keep the soap. This made up to the midwife a little for the disappointment she had felt when she realized that the scissors were not some new kind of obstetrical instrument, but had been brought just to trim her finger-nails.

It was getting late and, as there seemed to be no immediate prospect of the baby arriving, Boochamma suggested that Miss Stoudenmire go back and get some sleep. The women in the house were reluctant to let her go until she had promised to return when they should send for her, which they would do when it was almost time for the actual birth. She did seem to know something about this business. They were impressed with the way she had gone about the scrubbing. They remembered, too, what the Bible woman had told them about the kindly efficiency with which the missionaries took care of people in the hospital. Perhaps Ma-ha-lak-shmi

Rats, Plague, and Religion

could escape those days and days of fever which they had come to think were almost inevitable after childbirth.

All this faith in her ability, and the urgency of the request for her return, made it harder for the young lady missionary, who had never yet witnessed a delivery, even in a modern hospital. What should she do? She offered up a silent prayer for help. Yes, she would come back. Then she could at least see that the old woman used the cake of soap.

Boochamma went with Miss Stoudenmire to the pastor's house, where they both prepared for bed, after having their evening devotions together. Somehow God would show them what to do, and would help that little woman lying there in that dark, dirty, awful room. In this faith, they lay down to rest.

A little while later, after she was sure the missionary was asleep, the Bible woman got up quietly and slipped out of the house. She knew that there was the work of the morrow ahead—the visiting in the homes of the Christians, the school, the teaching, and preaching wherever they could find a group of women and children together. And in this her American fellow worker would have to take the larger share. But

Mothers and Babies

tonight, she knew that her friend needed to rest. There would probably be no need of the missionary's going, for she herself had had several children, and had been present at deliveries in the hospital. She could help when the baby came; while they were waiting there were things she could explain to the women sitting by the bed.

They were not surprised to see her back. What she had told them before had produced quite a discussion while she was gone. They started to question her. Who was this new God? What was his name, and where was he? Was he in the country from which the white lady came? Why did Boochamma, an Indian, even though an out-caste, worship this foreign God? What special things did he do? Was he especially for out-castes? What did he look like? Did she have a figure of him in her house, or were his images to be found only in his temples?

Boochamma tried as best she could in her simple way to answer these questions. She told of her own faith in God, and about the Son of God who had come to show us the Father and who had lived and died to bring salvation to everyone. She told them that salvation was for women as well as for men, and recounted how Jesus had been interested in women and little children; she

Rats, Plague, and Religion

read from her Bible about it. Yes, her God was the God of outcastes, everywhere, but he was the God of other people, too. If they would believe in him they would see that he could do for them what he had done for her, and for many others.

The old midwife was giving close attention, even though she did not understand it all. But she had other questions, too: "Why do these people, servants of this God, come here to take care of sick people, as you say they do?" The Bible woman told her that Jesus had not only preached to and taught the people, but had healed their diseases, and that those who followed him were trying to carry on all these different ministries. Then she showed the woman some pictures she had in her Bible.

The others wanted to see them. "Oh, are these what you use for worship?" someone asked. Boochamma explained, and told the story of several of the pictures, ending with the story of Jesus curing the woman who stopped him on the road and touched the edge of his garment; for the midwife had kept this picture in her hand, and seemed especially eager to hear about it.

"What, this *man* healed the woman who had had the *unclean* sickness so long? What could a man know about such things?"

Mothers and Babies

The Christian woman told how Jesus had healed all kinds of diseases, in both men and women, and that there were both men and women doctors who specialized in caring for the diseases of women, as of other ailments. She was telling about her own daughter, who had been cared for by the missionary doctor, and of other women she had seen in the hospital, when she was interrupted by the cries of the young woman on the bed. They all gave her their attention. There was no time to call Miss Stoudenmire.

The midwife nearly forgot about the soap, but Boochamma reminded her, so she had washed her hands again by the time she was needed. The baby came, with less trouble than they had expected. A fine, healthy-looking boy. They all congratulated the mother that it was a boy!

Miss Stoudenmire was both glad and relieved to hear the news, when she awoke the next morning. And several cakes of soap, as well as the scissors, are now a permanent part of her touring equipment!

The midwife in this story is fairly typical of the women under whose superintendence fully ninety per cent. of Indian children are born. They will doubtless continue to serve thus for

Rats, Plague, and Religion

years to come. The extreme poverty of the people; the insignificant number of physicians and nurses, either Indian or foreign, in proportion to the population; the traditions and taboos regarding the presence of a man at a childbirth—all these reasons make it inevitable that the major portion of this work must continue for a considerable period to be done by the midwives. It is therefore through the midwives that the problems of maternal and infant mortality and health must be approached. The fundamental defect of native midwifery is that these women have the wrong attitude toward their task. They consider it as essentially a dirty business, both literally and ceremonially. If they can be induced to regard their job as a profession, their work as ennobling, and if they can be taught to clean up, and to realize that their task is primarily to get rid of and help their patient keep free from physical dirt, the majority of Indian midwives could be depended upon to render what would be, on the whole, in normal cases, satisfactory service. Furthermore, as regards abnormal cases, midwives so trained would be taught to recognize at an early stage their need for help, and to summon a doctor; or else send their patients to the hospital before it was too late.

Mothers and Babies

This training of the native midwives should be one of the prime objects of medical work in India. The doctors in the hospitals should be constantly training nurses, who in turn should be sent out to the villages to train the midwives. The sending to a few villages of graduate nurses trained in midwifery, to compete with and supplant the old-time midwives already there, is far from adequate. This, indeed, needs to be continued wherever possible; but cleanliness in delivery must become more wide-spread. The minimum education of those who at present carry the major share of this work should receive more attention than it has hitherto. A definite program of this sort has been worked rather successfully in a few limited areas. More needs to be done. This can be accomplished most easily by cooperative effort on the part of all workers in the rural districts, whether hospital trained, or engaged mainly in evangelistic and educational work—as was Miss Stoudenmire. Many of these latter have had experiences similar to hers, but their efforts need extension and coordination.

The taboo of ceremonial uncleanness surrounding childbirth has other effects, even more far-reaching than its results in the practice of the midwives. It affects the whole position of

Rats, Plague, and Religion

women in society and in religion. How could the important positions in social, in political, and particularly in religious life (where ceremonial "purity" was so important), be given to woman, who must be so often taboo? And so woman, because it is her function to perform that "impure" process by which all of us come into the world has been forced into the background, and in some religious systems almost out of the reckoning, unless she could somehow escape from her usual rôle of wife and mother.

This ceremonial uncleanness of woman has had the effect also of contaminating any relations with her. Thus sexual relations, "impure" ceremonially, have easily and frequently become actually sordid and unclean. Since women are "unclean," it seems a very slight matter to mistreat them and to abuse relations with them. For the results of such abuse in disease and otherwise, woman of course carries the blame; and it is not only in India that venereal diseases are commonly spoken of as "women's diseases."

The effort to take this ceremonially "dirty" function of child-bearing and make of it something actually *clean* and *pure*, has been relatively recent. It has been accomplished largely through the work of men and women of science, at first

Mothers and Babies

against strong religious opposition, and even now often without religious, or at least ecclesiastical, sanction. Yet this effort has its root in the teaching of Jesus of Nazareth. He it was who actually took birth, that "dirty" thing, and changed it into a symbol of the process whereby a man becomes worthy of eternal life: "Ye must be born again." India helps us understand why Nicodemus was so surprised at these words of Jesus.

Indeed, the solution of this whole problem of womanhood and motherhood and public health is to be found in the attitude and spirit of Jesus. He taught us a new respect for women and little children. It has taken many centuries for his teaching to be understood and followed; but the day has begun to dawn in Europe and America, and it is to be hoped it will soon fully come in India and in all the world; the day when nothing human and natural and right shall be called common or unclean; when Jesus' commands to heal and teach and preach shall be carried out "unto the uttermost parts of the earth."

VI

THERE WERE MANY SICK OF
DIVERS DISEASES

THERE WERE MANY SICK OF DIVERS DISEASES

1. WHICH KIND OF SODA?

Not ice-cream soda, if you please, for in all India ice is a rare commodity. Even in most of the cities it is obtainable only in the hottest weather.

Laksh-mum-ma had a severe stomachache one day and thought she would take some baking-soda to relieve it; for this common home remedy is used almost everywhere in the world. There were two earthenware jars in the house, one containing ordinary baking-soda and the other soda-lye. The difficulty was that she didn't remember which was which. You see, she belonged to the dyer caste, and so in their home were the various tools of the trade—not the indigo and old vegetable dyes used so much in days gone by, but the more modern, chemical coloring agents. With these, the two kinds of soda must be used, hence both were at hand.

Laksh-mum-ma, not being sure which was the right jar, and her stomachache being very urgent,

Rats, Plague, and Religion

took just a little. It was not long before she found she had taken the wrong soda. Even a small pinch of lye in the throat can be pretty painful. She had a miserable time of it for a couple of weeks, and when at last the pain eased up, found that it became increasingly difficult for her to swallow. What does a burn, anywhere, do as it is healing? It contracts, so that the scar becomes smaller and smaller. This is very helpful, unless it be on the face, or as in her case, in the tube of the throat. The burn scar in her throat upon contracting had left the tissues so united that she had an opening about as big as the upper hole of a little boy's whistle. Through the normal opening, one could probably swallow a small egg, if one did not know it, even though many people do have trouble swallowing an aspirin tablet.

Laksh-mum-ma stayed at home with her trouble for something over a month after the burning of her throat, but finally heard of the mission hospital and came the ten or fifteen miles from her home to see what could be done. Some of her troubles were obvious enough to us as we questioned and examined her. She breathed with a sort of whistling sound, and whenever she took a drink of water or milk—the only food she had

There Were Many Sick of Diverse Diseases

had for several weeks—she had to stop breathing, and so she coughed badly, and choked. But of these difficulties she did not complain. Her only complaint was, when we asked her what she had had in the way of nourishment—she was exceedingly thin—“I have not eaten anything for a month.” This is a fairly common statement of patients who come to us in India after having been sick for a long time. At first it was confusing, and if we did not know their customs and language we would think they were trying to deceive us. No, she was not lying, all she meant was that she had not had any rice, without which no rice-eating Indian feels he has had anything to eat.

The examination of this woman's throat was difficult enough with only a kerosene lantern, instead of the proper electric light for indirect illumination. However, we finally found what was what in the tissues of her throat, and figured out just where the cutting would have to be done to try to restore the parts to something like normal position, and most of all to make an opening through which the good lady could swallow her rice.

The details of the operation may be passed over. She was a good sport and sat still, follow-

Rats, Plague, and Religion

ing directions carefully, even though the operation took an hour and had to be performed with only a local anesthetic. General anesthesia was impossible, for we needed her cooperation to hold her breath each time we put the instruments in her throat. When we had made an opening large enough to admit one finger, we were highly pleased. In order that she might feel satisfied for what she had been through, and willing to undergo what further might need to be done, I asked one of the nurses to bring in a little cooked rice, mixed with water, which we offered to the patient to swallow. Imagine being confronted with food to eat at the end of an operation on the throat! But that was not what caused her to hesitate. She was a caste woman, and this nurse who was handing her the ball of rice, though now a Christian, was to this woman still an outcaste. The two things one caste most decidedly refuses to take from another are cooked rice and water. Even the touch of another on these principal items of diet defiles them for the caste Hindu. We very much wanted her to take this rice, and from the gleam in her eye when I told her she was now able to swallow, you could see how eager she was for it, after her long abstinence. There is usually some solution to

There Were Many Sick of Divers Diseases

difficulties. It was only as food that she must refuse it. As medicine, she could take it from anyone who offered it, and so the Doctor ordered the rice for her as a dose of medicine. How happy she was when she found she could swallow again without coughing or choking! She gladly stayed on at the hospital for us to do as much as we could with the instruments we had.

We did not have the modern instruments of the proper shape and curve for doing this type of work, so we asked the woman to return after two or three weeks. Meanwhile we would try to get some better instruments from Bombay. But we never saw her again. She had come because she could not swallow rice. When she could eat again, she was happy even though her throat was not half normal size, and she would continue to tell what wonderful things had happened to her at the mission hospital.

2. A "TABLE" ON THE STOMACH

"Doctor, I have come to be operated on," said the next woman in line at the dispensary. We looked her over. It was obvious that she needed to have something done to her, for she had a very large swelling in the region of the abdomen. So we told her to get ready to be examined. She

Rats, Plague, and Religion

hesitated, and then said, " But, Doctor, I know what is the matter with me, and I did not come for medicine. I have a *table* on my stomach and you must take it off." This at least is the literal translation of the Telugu word she used. The same word is used for "table" and for any hard mass in the abdomen. Then she told us her story.

She lived some hundred miles away from our hospital. She had been feeling pretty well, but gradually noticed an enlargement of her abdomen, over a period of months. She assumed, of course, that she was going to have another baby. But when nearly a year had elapsed and, though she had no pain, the mass continued to grow, it became apparent that something other than pregnancy was the difficulty.

She belonged to the caste who draw the juice from the palm-trees and sell it as a kind of intoxicating liquor. Though not rich, she had some means for going where she wished to have medical treatment; so, after trying all the local remedies, she had gone to a woman's hospital about 150 miles in the other direction from her home. They had treated her very kindly, she said, and had examined her carefully; but when she asked for medicine they told her that medi-

There Were Many Sick of Divers Diseases

cine would not cure her, she needed an operation. So that night, when everybody was in bed, she slipped away and went home. Now that the tumor in her abdomen continued to grow, and that she could not even sit down comfortably, she began to think that possibly the doctors had been right, and that she would not get well without an operation. A man in her town had been to our hospital sometime before. He had had an operation, and had returned feeling very much better; so she came to our hospital, thinking that we specialized in operations. The reason she had gone to the other hospital was because someone she knew had been cured there by medicine. We operated on this woman, and removed a cystic ovarian tumor weighing between sixty and seventy pounds—she did not weigh much more than that herself after the operation.

So she had come in faith, and went home happy. Despite her first fear of the hospital, now she praised it highly. There soon arrived from her village a patient of the same caste with a similar complaint. It was a man asking to have the “table on his stomach” removed. Quite typically, she had not recommended the hospital to all the sick in her village, but only to those whose trouble she considered to be like her own.

Rats, Plague, and Religion

It was obvious that he had a different type of tumor. As we examined him, we found that the large mass in his abdomen was a big spleen, which had been enlarged by reason of a peculiar tropical disease called *Kala-azar*. This disease is caused by a tiny parasite carried in the body of sand flies and introduced into the human body when they bite. To have acceded to the man's urgent request for an immediate operation would have been risky, if not fatal, and of improbable value in the curing of his disease. How disappointed he was, for he had expected to go home well, as had the woman, in two or three weeks. We persuaded him, week-by-week, to stay longer. After three or four months of injections, he was very much better. However, every now and then he would ask, "Don't you think you could cut out my 'table' as you did for that woman, and make me well quickly?"

3. OINTMENT OR RADIUM

"Sister, what's the matter with your boy's arm?" Na-gai-ya had had to go to the city and on his way back had stopped off at the little village of Veng-ka-poo-rum to see his favorite younger sister and her family. "Oh," she replied, "this swelling near his shoulder isn't any-

There Were Many Sick of Divers Diseases

thing new, and it doesn't give him any pain, but it's been growing for a couple of months. Now his arm is becoming thin, and he has trouble in using it as he used to. It does not seem like one of those abscesses that we could get the barber to open for him. We took him to the barber who felt it and said, 'Why that is hard, I won't touch that. Perhaps it will go away by itself.' It hasn't gone away, and oh! his shirt doesn't go on very well. Still, he is not having any pain, so why should we worry?"

"But, sister, you know we want to arrange for his wedding ceremony one of these days, and would that crafty old uncle of ours let his daughter marry a boy with a big lump on his arm? You say he can't use it now to lift things. I think we had better do something about this. You know our brother, Krish-na-swa-my, had a big swelling on his forehead, and we had tried all the medicine from the local bazaar, but when he went to that foreign hospital in Ongole, they gave him some ointment and in almost no time the swelling went away."

Veng-kam-ma was interested, but at the thought of the long trip to Ongole, she objected: "Ongole is so far away. Besides, what good would it do? We have tried all the different

Rats, Plague, and Religion

leaves and other combinations that the old ' Doctor ' here has suggested, and the swelling keeps right on growing; not fast, but each week it is getting larger." Finally, the advice of the brother was taken and the woman brought her son to the mission hospital in Ongole.

How hopeful and how wistful she was when she asked for just a little ointment to take home with her to rub on the boy's arm! She had heard of the wonderful things that medicines from this hospital had done. And how we hated to tell her the truth. Not only when we first examined the arm and heard her story of the growth of the mass, but when a careful examination had confirmed our fears, we knew that it was a very malignant type of bony growth. Almost certainly it would destroy not only the boy's arm, but his life, within a very few months; even in spite of radical treatment.

We offered the best that we could. We suggested that the woman take the boy to the nearest place, Madras—some 180 miles away—where a combination of radium and surgery could be used in an attempt to save him. You can imagine this village woman's response. She knew nothing of cancers and tumors. A swelling was a swelling, and had she not been told that in this hospital

There Were Many Sick of Divers Diseases

they cured swellings with ointments? We were able to convince her of the seriousness of the condition, for she did finally admit that week after week it had been getting larger. When we told her it would destroy the boy's health as well as the strength of his arm she became frightened. Nevertheless, to go to Madras, where so many of the people spoke a different language, was as if one had to go to Europe for something one had expected to have treated at the corner drug-store. She had neither the money nor the courage to undertake such a trip.

The next best we could offer was to amputate the arm high up at the shoulder; but at mention of cutting off the arm she was even more frightened. Hence, like many others, she turned away sorrowful. And what could we do but tell her that when it did begin to give the boy pain, she could go to the local bazaar and buy a little of the crude opium easily obtained there, and give him enough each day to ease his suffering—until he died?

As she started away, a thought occurred to Vengkamma. She came hurriedly back to the doctor, and said, "But won't you give me some of that ointment that cured the swelling on my

Rats, Plague, and Religion

older brother's forehead? ” We assured her that it would do no good, but she offered one rupee (a rupee is equivalent to about forty cents), then two rupees, and then five rupees, if we would only give her some of that ointment. When we continued to refuse, she said, “ But if we stay here, can't you send and get a little of that medicine you tell me they have in Madras? ” We tried to explain that it would probably cost about as much as the value of all the houses and land in her village. She was used to “ tall stories ” and again offered a little more for the ointment. Finally, convinced either that we did not want to treat her boy or that his condition was really hopeless—we do not know which—she started home.

Too late. If only they had come sooner. But why should they come? They didn't know that the painless swellings are likely to be the most dangerous ones. We should like to be able to visit more of the villages from which such people come, and discover some of these cases of malignant tumor before they become hopeless. And we could save more of them, if in addition to our surgery, radium or high-power X-ray were available in more of the hospitals in India.

There Were Many Sick of Divers Diseases

4. A MAN CAME WALKING

Through the door of the dispensary entered a young man of about twenty-five, supported as he walked by a woman who appeared to be his mother. She helped him down to a sitting position, and then asked for the doctor. My assistant called me immediately, for it was quite evident that the young man's condition was very serious.

The mother told us that they were from a village about thirty miles away. They had walked a few miles to the main road, where they had taken the bus which had brought them to Hanumakonda. Then they had walked to the hospital, not thinking it necessary to pay the extra amount to have the bus bring them to the dispensary door. The young man had been sick for five or six days, with pain in his abdomen. They had given him all the different kinds of medicine that were suggested by neighbors and friends in their village. But the pain had grown worse. Then his abdomen became bloated and he was feverish. The pain was a little less now, they said, but he was very weak; and he hadn't had a motion for four days.

Rats, Plague, and Religion

“ Doctor,” said the mother, “ the medicine we gave him didn’t seem to help. Won’t you please give him some that will cure him? ”

Examination revealed that the young man not only had intestinal obstruction, but also general peritonitis. His chances of recovery at this late stage were almost nil. If we operated immediately he had, perhaps, one chance in a hundred. But after his long trip and the exertion of walking, even that chance had probably disappeared. I explained the matter to them, allowing the man to rest for a while on the examining-table. The mother refused to consider even the thought of an operation. Prostrating herself on the floor in front of me and holding tightly to my feet she begged, urgently: “ Please give him just a little medicine. I am sure you can cure my son. You have cured so many others.”

Telling the woman to get up, I tried to explain. “ It isn’t that we do not want to help him. We cannot cure all the patients who come to us; but I think we could have made your son well if you had brought him to us when the pain first began. Even if you had come two or three days ago, we would have had a chance to save his life. Now I am afraid it is too late. Even a small emergency operation—all he could possibly stand now—

There Were Many Sick of Divers Diseases

offers little hope. We are willing to try it, if you wish, but we cannot give any assurance."

We couldn't blame her much for refusing the operation, for in all probability the boy would die, anyhow, and that speedily. So we told her to go and arrange for a cart, or have a bus come and take her son quickly. They needed to get started in a hurry if there was to be any hope of getting the son home before he died. It would be almost impossible to secure a cart for him after he died. Most of the cart-drivers are Hindus, and they would not want to have their carts defiled by carrying a dead body. That would necessitate a purification ceremony. Starting out with a man who was very sick, even dying, was different. If he passed away after they had started, and the cart was contaminated, that wasn't the driver's fault. At least he hadn't commenced the journey with a dead man.

I came back to the dispensary later, expecting to find that the mother and son had gone. But the young man had gotten off the examining-table and was sitting on the floor of the dispensary waiting-room. His mother was there beside him. When she saw me, she again prostrated herself and begged me to cure her son with medicine. Again I explained the situation to

Rats, Plague, and Religion

her and urged her to hurry to get started home. The cold sweat was now coming out on the young man's face. But the mother just couldn't believe what I told her. Wasn't her son still able to sit up?

An hour or two later the young man died. What his original condition had been it was hard to determine. Perhaps acute appendicitis. To the family, however, and to the other people in the village it was just a stomachache. In their minds and in the old systems of medicine, pain in the abdomen is a single disease. Undoubtedly some of the remedies given in the village, where there was no doctor, were strong purgatives. Crude mercury is frequently used in these mixtures. It usually causes catharsis, but may also produce damaged kidneys, or gangrene of the mouth and face—especially in malnourished children.

The poor mother was prostrated with grief. She had mistaken her son's peculiar alertness, common to many cases of severe peritonitis, for a sign of improvement. So now she was overcome with surprise as well as sorrow, and was utterly unable to do anything for herself. We sent a boy to the bazaar to see whether he could persuade a man who had an old bus, or one of the cart-drivers, to take the dead boy and his mother

There Were Many Sick of Divers Diseases

back to their village. He returned about an hour later, unsuccessful.

In situations like this, we have sometimes been able to help by taking or sending the hospital car. Even if the patients come too late for us to be able to render much medical aid, we can still help a little by serving in place of an undertaker! But on this day we were unable even to give that assistance, for the old Ford had been laid up for repairs all the week.

Finally, toward evening, some people were found in Hanumakonda who belonged to the same caste as the woman, and who were able to help her make local arrangements for the cremation and other last rites for her son. The next day she had to return home alone.

5. STONES, MILK, AND FISH-OIL

Mul-lai-ya, aged five, had been having trouble for several months. His parents had tried first one medicine and then another that their neighbors had recommended, but he didn't improve. The pain kept getting worse, and its attacks more and more frequent. The poor little boy was awakened by it so many times at night that both day and night he was sleepy, drowsing off when the pain let up, only to be aroused by another

Rats, Plague, and Religion

attack. It had become difficult for him even to eat, for the urgency and sharp stabbing occurred every five or ten minutes; and he had to stop everything else in his vain attempts to get relief.

It was slow business carrying him in to the hospital, as they finally did. Every few minutes his father had to let him down. The little fellow would squat on the ground, all doubled up, until the spasm had passed.

While we were trying to examine him, Mullaiya had several of these attacks. The cause was suggested to us by the character of the pain and urgency, so we examined the little boy's bladder and felt the stone in it. We knew that to produce such excruciating pain it must be one with sharp points.

Before it would be safe to remove the stone, however, there had to be preparation, and that preparation must be largely nutritional. Like so many children, especially among the poor, Mullaiya had not received much milk since his mother had stopped nursing him. Because his diet had been deficient in vitamin A, his tissues were not healthy and a foundation was laid for the development of the stone. Sometimes, under similar circumstances, it is the eye, or some other

There Were Many Sick of Divers Diseases

organ, that is first affected, instead of the urinary tract.

We saw to it that this boy received as much milk as he could take for a few days, and gave him liberal doses of cod-liver oil. Then we operated and removed the stone. It was a little smaller than a black walnut and like that nut had a rough surface. What a relief it was to Mul-laiya to be rid of the stone. Within a few days after the operation he looked like a different boy. How happy he was not to have that constantly recurring pain. We explained to his parents, however, that he must continue to receive at least a small amount of milk every day, and must keep on taking cod-liver oil after he returned home, or there was a strong chance that more stones might develop.

Veng-kar-ta Soob-bai-ya was a young merchant. He usually worked on his accounts at night. But in the last few weeks it had been increasingly difficult for him to see by the light of the lantern, or even when he kept the brighter petrol light lit, after the shop was closed. He tried doing his work in the daytime but every day his eyes bothered him more. They seemed to burn all the time, especially when he went out in

Rats, Plague, and Religion

the bright sunlight. He came to the hospital to have his eyes examined. He thought some medicine might help them; or perhaps he needed glasses. Neither of these, however, was the answer. There had been a deficiency in his diet. Cod-liver oil would supply that lack, but Vengkarta Soobbaiya was a strict vegetarian and his religion forbade him to take fish-oil as a part of his diet. He was, however, permitted to take it as medicine. Within a week the improvement in his vision was quite remarkable.

This "night-blindness" is found, too, among our school children. That and other milder chronic eye troubles, and deficiency conditions affecting other organs, demonstrate the inadequacy of the diet in the poor village homes from which they come.

Day-va-dun-num had been a cause of anxiety to us for quite a long time. It was not that he was ever seriously ill, or in great danger; but this seventeen-year-old Christian boy continued to have abscesses on his face one after another, over a period of several weeks. When he first came he had one in front of his left ear and another below it, near the angle of his jaw. These were opened, seemed to drain well, and were be-

There Were Many Sick of Divers Diseases

ginning to heal up; then a new one appeared. Each time another abscess started the poor chap had some fever and suffered considerable pain. It seemed not to be a very malignant germ which was responsible, for he didn't have much general reaction, the fever was never high, and after the abscess had reached a stage when the pus could be drained out, he felt better. Various antiseptics were used, different laboratory tests were made, but the reason for the continuance of the trouble remained uncertain.

At the time Dayvadunnum entered the hospital, we had asked him about his diet. He said that he ate the usual curries with his rice, and that he sometimes had milk, which he liked. That diet appeared to be adequate, but when we failed to find other cause for this boy's trouble we returned to the idea that dietary deficiency of a moderate type might be a factor. After questioning him in greater detail, we decided to try the effect of cod-liver oil. The result was startling. We didn't have to open any more abscesses on that boy's face.

This is not a testimonial for cod-liver oil. That remedy is, of course, not a specific cure for abscesses. It so happened that the long-standing deficiency in this boy's diet made him susceptible

Rats, Plague, and Religion

to the attack of this special germ. This story, however, illustrates the fact that we must continually bear in mind the matter of nutrition, particularly in dealing with poverty-stricken classes.

In adults, stones often develop because of infection or because of some sort of obstruction, rather than from faulty nutrition; but in children like Mullaiya they come mainly from lack of proper sources of vitamin A. Stone formation, furthermore, is not limited to human beings. In parts of India cattle also develop stones. This may help to explain why some people, even though they are getting milk or milk products, show signs of vitamin deficiency.

It is obvious that changes are needed in the traditional dietary of many of the people—and cattle. The raising of fresh vegetables needs to be encouraged. Charts and pamphlets are available, in the different languages, to help educate the people to balanced diets. But so few can read that someone has to explain the pictures to them. A small, traveling demonstration unit would be very effective in such work. Several cages of rats, or other suitable animals, fed on characteristic diets of the different groups in a locality, and another set fed on more adequate—

There Were Many Sick of Divers Diseases

but no more expensive—foods, could be set up in a small truck, which also carried charts, leaflets for distribution, and a stereopticon for showing illustrative pictures. With a demonstrator, and another man to take care of the animals and drive the car, this unit could reach many villages with object-lessons in nutrition. It would also serve to provide means for research in the special dietary needs of different areas. This is very important, for a good many of the food articles have not yet been sufficiently studied to warrant advice as to whether they should be kept or eliminated. Rats running loose may carry plague. But rats kept in cages can be made to serve the cause of health.

6. LED BY A ROPE

One day I chanced to look over toward the road by the hospital compound just in time to see a little procession. In front were a couple of policemen, in their khaki uniforms and high turban-like khaki hats. With them were three or four other men in ordinary dress. But they did not seem to be prisoners. Behind walked a man, all alone, who kept always at the same distance from the others. I looked again. He was being led along by a rope.

Rats, Plague, and Religion

There was something strange about this group. I wondered what kind of criminal this man could be. Many times I had seen prisoners under police escort going from the central jail, two miles down the road, to the Munsiff's court, which was almost across from the hospital. But they had either been handcuffed to some of their guards, or else preceded and followed by policemen carrying rifles with fixed bayonets.

The husband of one of our patients was standing near me. He was an old resident of Hanumakonda. I asked him if he knew why they were leading this man along the road in such a way.

"Oh, that is just a crazy man," he answered. "He is probably being taken to the office of the Civil Surgeon, where he will be examined for commitment. I suppose they will send him to the jail in Hyderabad City. That's the only place for such creatures."

Provision for the care of the mentally ill is still very inadequate in India. In the largest cities there are a few mental hospitals. Some of these are fairly modern, and have facilities and staff for the treatment of milder cases, which have promise of cure, as well as for a sympathetic and understanding care for the severe

There Were Many Sick of Divers Diseases

and violent ones. There is such an institution in Madras City. But in all of Madras Presidency, with a population of at least fifty million, it is the only hospital of its kind. Naturally it cannot take care of those from outside the Presidency. In Hyderabad State there is but one mental hospital. It is located in Hyderabad City in quarters attached to the jail. The space there is very limited, and only the most violent cases can usually be accepted.

There is great need for a union Christian mental hospital. In such an institution the Christian ministry of healing could render great service to this class of patients, especially those with the milder, or temporary, mental disorders. It would serve also as a place in which to train nurses in a better understanding of such patients.

At one time we had a case of postpartum mania in our women's ward. The woman—a high caste Hindu—had been brought in by the family because they were utterly unable to manage her. She had been ill with fever after the birth of her baby. At the time we admitted her she was in a state of excitement, unable to sleep, refusing food, and talking wildly. She seemed to be suffering from an acute exhaustion psy-

Rats, Plague, and Religion

chosis. The treatment was not complicated; the patient had to be kept quiet with sedatives and fed, if necessary, by force; and as far as possible her whims needed to be humored. Her progress was slow, but gratifying. The real problem we had was with the other patients and the nurses. Those in the near-by rooms were frightened by her cries and delirious talk, and asked to be discharged from the hospital. Although she was not violent, the special nurse assigned to her care seemed reluctant, even in broad daylight, to be in the room alone with her. And no one was willing to try to feed the woman, except the doctors and Miss Robbins. In a conversation between two of the nurses, which we overheard, they expressed their fear of the patient and their belief that she was demon-possessed.

As fear prevents sympathetic understanding and care of cases of mental derangement, so ignorance and misunderstanding increase the difficulties in dealing with mental defectives. Many people find it hard to realize that, though a child may be deficient in intelligence, he may still be emotionally sensitive.

A baby died in the hospital, and we were trying

There Were Many Sick of Divers Diseases

to comfort the mother. She had three children left, but the oldest was a feeble-minded daughter, nicknamed "Crazy One" by the rest of the family. She was with her mother at the death of the baby, but the mother's oft-repeated cry made us wish she were not. For the mother, pointing to her daughter, said over and over, "Why should I lose my baby, and still have this worthless, crazy girl to care for?" Of course the girl was a burden to her, but needed sympathetic care; and if her mother failed her, who could be expected to provide it? This mother was not alone in her attitude, her neighbors would all have felt the same and would have been just as callous in expressing their feelings in front of the unfortunate girl.

Special schools or institutions for backward and feeble-minded children are therefore clearly needed, not only for the sake of the children they might care for, but also for their educative effect on the whole attitude of the people toward such unfortunates. Yet in all South India we know of no such institution. Even one, putting into practical effect the compassion of the Master for "even these least," would lead the way to the better understanding and kindly care that is so urgently needed.

Rats, Plague, and Religion

7. RED PAIN

A letter was brought to the hospital one afternoon by a young man, riding a bicycle. He explained that he had come from the pastor in Hassa-na-parthy, six miles from Hanumakonda. Here is the message which he brought:

D/24/3/34

RESPECTED SIR:

We most humbly beg to you to Come and Visit our Village, Because last day a man died, by double Minonia when he was in fever asking water and his eyes red speaking as he likes so we are doubting about him, now another person is with high fever. waiting for your Kind arrival,

Salams to you—
we are yours Most Obedient
Servents
Hassanaparthi pupil.

.....
(Sd. P. Sampson Preacher)

On the margin was this additional note:

“who died
His right Shoulder
has red pain
The sick woman also the same—”

There Were Many Sick of Divers Diseases

The boy who had actually written the letter was one who had studied in our mission school. He was helping the pastor in showing me one of those little courtesies common in the East, writing to me in my own language, even though he knew that I could read a letter written in his.

Pastor Sampson, who signed the letter, could read and write very little English. In many other respects the short-comings of his education were glaring. Judging him by American standards, we would come far short of recognizing his true worth. To appreciate properly this devoted servant of the Lord, one should have seen him, as the missionary doctors have, under many conditions of joy and sorrow. Then one would be led to admire him as a fine Christian character, and to value him as a worthy friend. We knew that if this man sent a call for help the need must be urgent. It was a little difficult to be sure from his message just what preparations to make for treating the patient described, but we took our bag and went out to Hassanaparthi.

One side of this village is close to the main graveled road, but the part where the outcastes and Christians live is over on the far side, about a mile from the highway. We drove through the winding streets, having to proceed slowly be-

Rats, Plague, and Religion

cause of the sudden turns and many deep ruts and holes. Some places in the streets were so bad that the car tilted to an alarming angle. At one or two intersections we had to wait, for it was the time of the afternoon when the boys drive herds of cattle back to the homes of their owners. Finally, we passed from the village proper across the little space that separates it from the pallem (or separate hamlet) where the outcastes live. The Christians also live in this locality, for they belong to the same group, by descent, and even though they have changed their religion they remain outcastes.

We stopped beside Pastor Sampson's house. The first thing we found, when he invited us to come in, was that there also someone was sick. A married daughter, who was visiting her parents, had caught a severe cold, one of the grippe-like colds that were at that time spreading around the town and village in almost epidemic form. The Pastor asked for some medicine for her, but said that he hadn't called me especially to see his daughter, for he had planned, if she were not better by the next day, to bring her to Hanumakonda to the hospital. I arranged for him to do this.

The Pastor, accompanied by the group of men,

There Were Many Sick of Divers Diseases

women and children who inevitably gather when a car comes to a village, then took me over to the house of the sick woman. On the way he explained about the symptoms of the man who had died, and told me a little more about a number of other people who had been sick with heavy colds, or what he had taken to be pneumonia. We stopped at a little house with mud walls and a thatched roof. The door stood ajar, but the interior was only dimly visible. There were no windows, and it was very dark compared to the bright sunlight outside. We called out in the usual way, "Who is (here)?" One doesn't knock at the door of an Indian house. We did not receive a spoken reply, but there appeared at the doorway a little wisp of a woman. She was so weak that although she went through the forms of politeness in greeting us she had to lean against the door frame as she did so. We told her at once to sit down, for perspiration was streaming from her forehead, and we could see that she was scarcely able to stand. Her sense of courtesy to her visitors, especially to the strange foreign doctor, kept her standing until we insisted that she sit. It was her traditional sense of what was polite that had led her to get up out of bed to answer the door instead of call-

Rats, Plague, and Religion

ing to us to come in. Examination revealed that this woman had just passed through the crisis of pneumonia.

She had been alone most of the time during the six or seven days of her extreme illness. Before she was taken sick her husband had gone away on business, probably driving a cart for his employer, or something of the sort. There were no others of the family living in the house with them, and the only one who had been in to help had been her mother-in-law, who came once or twice a day to bring her fresh *gunjy* (rice gruel) and water. The mother-in-law had to work the rest of the time in the fields, and had her own family to take care of at night.

It was a serious problem what to do to help this very sick woman. If the hospital had been closer, or the roads not quite so rough, we would not have hesitated to take her back with us. Proper nursing care and help with her diet during convalescence would have been a great assistance; she was, however, so weak that we were afraid the trip to the hospital might do more harm than good. Anyhow, she could not leave home without her husband's permission, and would not leave their house alone. So we put the sick woman back to bed, and tried to arrange

There Were Many Sick of Divers Diseases

for different neighbors to come in and help her, as they could manage to get away from their own work. Not much in the way of special medical help was needed at this particular stage of pneumonia, but what assistance was possible we gave; after which we all joined in a prayer that God would give her the necessary strength for recovery.

Then the group of us walked back toward the Pastor's house. We had much to think about, yet it was my own thought that the Pastor and a few of the others expressed: "Almost a week ago we tried to persuade the man who died yesterday to go to the hospital, but in vain. There was no use trying to persuade this woman, for with her husband away she just couldn't go. We wish so much that there had been someone to take care of her here. You see, Doctor, it is not only us Christians in this pallem who have no doctor or nurse, the whole village of six or seven thousand people hasn't even a small government dispensary. The only medicines obtainable here are those that can be bought in old bazaar shops, or are dispensed by the old-time practitioners. Some of the people can go to Hanumakonda when they are sick, but most of us—unless we are too sick to work—cannot leave our jobs long

Rats, Plague, and Religion

enough to go to the hospital. Even then we do not have the money to pay for the cart to take us. It was a help when you, or your assistants, used to come once a week to hold a dispensary here in our town. Why don't you come any more? ”

The answer, of course, was lack of money and of workers. Sampson understood this, for he had lately received more than one reduction in his already meager salary. Nevertheless, he went on to explain what he and the other Christians had been hoping and planning.

“All of our houses here are much the same, but over there you see a little space where in our spare evenings we could put up a building. We would collect mud for the walls, and then join together in getting material for the roof. That would be our house for the sick. If we can build such a house, and keep it in repair, couldn't you send us a nurse to live here and take care of the sick people—and summon hospital aid when necessary? ”

For long something of this sort has been our hope, not only for this one village, but we have hoped gradually to establish little nursing centers in each of the three or four villages where we used to call weekly on our traveling dispensary

There Were Many Sick of Diverse Diseases

day. They are on the main highway, so that it would be possible to reach them with a car at anytime during the year. In none of these villages is there any provision whatever for modern medical care and nursing. From such a start, we desire gradually to extend the work to the hundreds of similar villages also without medical and nursing care, though we would not be able to visit them even weekly three to five months of the year, because of the poor roads during the rainy season. It was hard to have to say "No" to these earnest men who, in the presence of a real need, had devised a plan for at least partially meeting it. While it is the missionary on the field who has the difficult task of voicing that refusal the real "No" in response to such urgent pleas is spoken by those who reduce or discontinue their missionary giving.

We have never been able to get an adequate explanation of why they call it "red," this pain of the pneumonia patients—when they must suffer with no nurse to soothe them and no medicine to diminish their suffering. But however it may be called, we know it means real suffering. We shall never forget the appearance of that little woman as she stood tottering in the doorway to greet us.

Rats, Plague, and Religion

8. THE WIDOW'S MITE

It was a hot July day, hot as only days can be in India. To the dispensary in Ongole came a little woman carrying a nine-year-old girl on her hip, as Indian women usually carry their children. The little girl was very ill with typhoid fever, and that thin little mother had carried her all the long twelve miles from their village.

Nar-sam-ma had started early in the morning, but she had had to stop several times on the way to rest and to get water for An-kam-ma, who seemed always to be thirsty but would never drink very much. So they didn't reach the hospital until just as the doctor was leaving the dispensary to go to the operating-room. The nurse called him back. After he had questioned the mother he examined the little girl, and arranged for her to be admitted to the children's ward.

"This is typhoid fever," he said. "You will probably have to keep her in the hospital for several weeks. The diet is very important. They will explain all about it over in the ward."

The doctor was turning to hurry back to his other work, when Narsamma called him, and hurrying after him, made a deep salaam. "Doctor," she said timidly, but as urgently as she

There Were Many Sick of Divers Diseases

knew how, “ while you are curing my little girl’s fever, won’t you please give her back her eyes? ” For Ankamma was blind; and to poor, ignorant Narsamma the granting of this latter request would be no greater a miracle than the accomplishment of the first.

Ankamma, it seemed, had been losing her sight gradually, over a period of about a year, and nothing that the villagers knew of helped her. Narsamma had thought many times of bringing her in to the “ foreign ” hospital, but twelve miles was a long way, and there never came any special time when she felt free to get away to take the child. For she was a widow and had two little boys to support, as well as Ankamma, and for this woman and her family, as for so many in India, a day without work meant a day without food. So they kept postponing the trip to Ongole until the fever started. She hoped that it would disappear in a few days, but it stayed and stayed, and the little girl grew steadily weaker. All the home remedies, and the advice of neighbors, were of no avail; nor the charms recited by the village priests, nor even the sacrifices to the village goddess. She broke a cocoanut at the feet of the idol and tied little rags on the sacred tree in front of the shrine. But the child grew more feverish

Rats, Plague, and Religion

and weaker, and Narsamma felt she *must* take her to the hospital, of which she had so often heard.

If she had only had money she could have had the child carried in a litter, or in an oxcart—which though springless and slow, is still better than nothing. Many maternity and other cases have to be transported to the hospital twenty or thirty miles in such a vehicle. There was a rattling old open bus running along a main road, only four miles from Narsamma's village; but she had no money for that, or any of the other conveyances. So, slight as she was and in spite of the burning heat, she carried the little girl all those twelve miles and said nothing of it. We learned of it only later.

There was a typhoid epidemic in Ongole just then, and it was the season of the year when more patients than usual are brought to the hospital. All of the hundred and ten beds were filled; patients were even being put on mats on the floor in all available spaces inside and on the verandas. And all of us, doctors and nurses, were busy day and night. So that for a few days Ankamma just seemed one of many. Then we realized that she was not getting the prescribed diet.

There Were Many Sick of Divers Diseases

In our hospital, as in many mission hospitals in India, the food for each patient is prepared by his relatives. This is necessary because of expense, and because of caste restrictions and dietary differences among the various groups. If we provided hospital food for all the patients, it would mean that we should have to have several cooks of different castes, to satisfy tastes and diet regulations. Our system has the advantage of keeping the relatives out of the wards, at least during the cooking-time. For the wards are apt to be congested, since there are so few separate cooking-sheds outside, and the relatives have to keep their food supplies, cooking utensils, and wood under the patients' beds.¹ And there, too, they find a sleeping place at night unless—as sometimes happens—they decide to keep the patient company on the bed.

On the whole, this system of depending on the relatives to provide and prepare the patients' food works surprisingly well, for the relatives are as a rule eager to follow the dietary instructions. In fact, if the doctor does not give special orders about food, they are sometimes skeptical about using his medicine. The old systems of medicine,

¹ In Hanumakonda, when the four small kitchens are in use some of the relatives have to cook out under the trees. This is not so bad in fair weather, but during the rainy season it involves real hardship.

Rats, Plague, and Religion

with which they are more familiar, lay special emphasis on diet and fasting.

Ankamma's temperature curve should have leveled off, or started down, but it was still high. We spoke to Narsamma, telling her the child would die if she wasn't given the proper food. She salaamed deeply, touching the ground in the abject village way, and promised to do better. But a day or two later she failed again, and this time, when we called her to task for not bringing the milk and limes, Narsamma said: "But I have no food to give her and no money to buy any. If only you'd give me work, I could feed my little girl as you tell me." This was the first intimation she had given of her extreme poverty. We knew she was poor, but very many of the patients are; and even some who are not will attempt to appear so by removing jewelry or fine clothes before they come—and pleading poverty to obtain concessions. Begging is an ancient and honorable profession in India, and no stigma attaches to those who beg for help in their need. So we were surprised and pleased at this appeal for work.

We found work for her, though it was "made work," at our bungalow, picking up fallen leaves and twigs from the lawn—if one can call our

There Were Many Sick of Diverse Diseases

struggling grass plot that. She worked all day without a word of complaint, and it was only when she came for her wage at night that we realized how weak she was from lack of food. We found that during these past few days she had been receiving left-overs from the relatives of other patients, but had used these only for her daughter; for herself there had been nothing.

From that time on she had work with us during all of Ankamma's long convalescence. We grew to love her for her honest, willing, generous spirit. She tried so hard to please us in whatever tasks we could find for her—all of them unfamiliar to her—that we could not really blame her when in her great zeal to weed the garden carefully she pulled up all of the young bean plants.

Ankamma recovered from her fever and we were all happy when she was strong enough to sit up in bed; and then to take a few steps. She had to hold on to the bed unless someone was there to lead her around. Both she and her mother had been asking every day, "When are you going to do something about the eyes?" We had waited for the time when we could examine them thoroughly without tiring the little girl too

Rats, Plague, and Religion

much; and when we could be sure that she was safe from the danger of a relapse of the typhoid fever.

Ankamma was very patient while we put in the drops. At first hopefully, she thought she could see a little when we caused a bright light to shine before her eyes. That hope soon faded. We found that there had been a gradual but complete atrophy of the nerves and organs of vision. It was very hard to explain to them that sight was gone and could not be restored, especially in the face of the great faith and desperate hope of the little girl and her mother. Narsamma had said: "I had to bring her here when I did because of the fever. You have cured that; but the real reason we came was because we had heard that some blind people have been made to see at this hospital. When will Ankamma be able to walk around again without being led?" Unless she could see again, what sort of prospect was there for this little girl, in her out-of-the-way village? Yet we just couldn't "give her back her eyes."

Something we could do, though, which was almost as much of a miracle to Narsamma and to Ankamma as if the latter had recovered her sight. We could send her to school again. She had been one of the very few among the girls of

There Were Many Sick of Divers Diseases

her village who had been fortunate enough to have the opportunity to be taught by the village teacher. She had had one year of it before her vision failed. One of Ankamma's sorrows in her blindness had been that she could no longer join the little class that usually met under a tree. But no one in her village had ever heard of a blind child going to school, or being able to study and learn to do things with the hands. Surprise was followed by joy when she finally understood that there was a place where she could be taught to "see" with the tips of her fingers. Through the help of some friends in America, we were able to send her.

So far as we know, in all the great Telugu area, where there is a population of about twenty-five millions, the Hindus have no schools for the blind, nor do the Mohammedans. There is but one institution of this kind, a Christian one, conducted by the Lutherans, in Ren-tha-chin-tha-la. At that school Ankamma spent three happy years, learning to do things for herself, learning to read and write a little in Braille, and most important of all, learning to know and love her Saviour. For Ankamma found Christ while she was away at school.

Only three years! She would have liked to go

Rats, Plague, and Religion

on in the school. But the sudden sick spells became more frequent, and she had found it much harder to keep up with the class work. We arranged to see her as we stopped in Ongole on our way from Hanumakonda to the mountains, and she was examined by some of the Ongole staff. It was apparently a tumor on the brain, slowly growing but inoperable, that had caused her blindness, and was now making it hard for her to study. Ankamma was sad when we told her that it probably would be better for her not to try to go back to school. But the sadness didn't last. Through her tears there was a radiant smile, as she looked up and said:

“Everything is so different now. I shan't have to sit in darkness, all alone, as I used to, while my mother is out working in the fields. I can sweep the house, and clean and cook the rice and kaffir corn; and I can go to fetch the water, too. And I'll call the other village children and tell them stories, and sing them the songs I learned at school, so that they may know of Jesus, too.” Only a twelve-year-old blind girl! The joy of Christ has transformed her from what might have been a life of bitter, lonely darkness to a life of joyful sharing of the Light of the world.

Narsamma, also, is a Christian; the first from

There Were Many Sick of Divers Diseases

the Malas in her village; and for that reason persecuted. She reminded us of the blind man whom Jesus healed. When Jesus asked him, "Dost thou believe in the Son of Man?" he answered at once: "Who is He, that I may believe in Him?" Thus Narsamma, when we first spoke to her of Christ, said, "Tell me more about him. I want to believe in him." And she does, even though it costs her much. She is thinner now than when we first saw her, but the joy of her Christian faith is lovely to see. She is an inspiration to many. In spite of poverty, and more days without work than before she departed from the traditions and customs of her group, her pastor tells us she gives regularly to the church, and is a willing witness to the new life which she has found in Christ and was so ready to receive.

We shall never forget her gratitude, and her friendship. She showed it in many ways, but one occasion is especially memorable. Somewhat less than a year after we had moved to Hanumakonda our own little son, then a year old, had been very ill with dysentery. The most dangerous phase seemed to be over, but diarrhœa continued, and he didn't gain any weight. We thought a change of climate might help, so Mrs. Carman took him to Ongole.

Rats, Plague, and Religion

It was strange how Narsamma heard that they were coming. We had not sent word very long ahead; I think it was only a telegram; but somehow the news traveled to Narsamma's village and, faithful friend that she was, this little woman decided that she must come in to town and do what she could to help. She had to finish her work in the field that day and she must have run most of the way to Ongole, for she reached there just before dark, only a few hours after the sick baby and his mother had arrived. And Narsamma did not come empty-handed. Tied up carefully in a little cloth were three eggs. Her friends had helped to make her daughter well. She wanted so much to help their little son recover.

Here was a simple, ignorant village woman, in extreme poverty, whose love and gratitude found joyous expression in giving, both to God and to her friends. She is a modern instance of the same kind of giving that Jesus commended, when he called the attention of his disciples to the fact that the little mite which the widow dropped in the collection box at the temple was really a larger gift than the bigger coins of the rich men—because it was all she had.

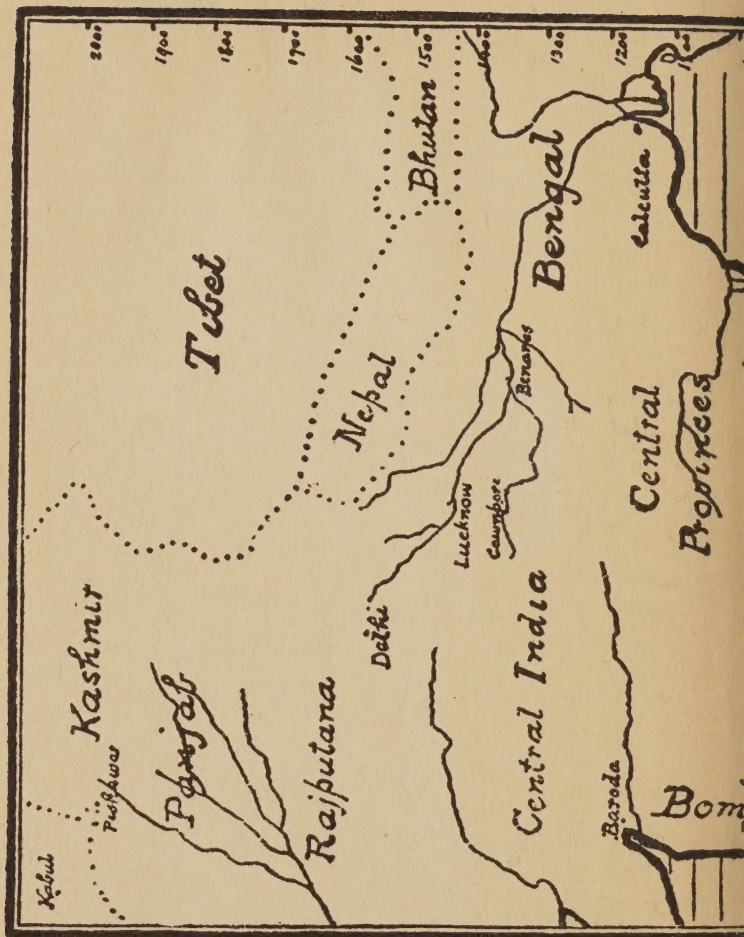
Date Due

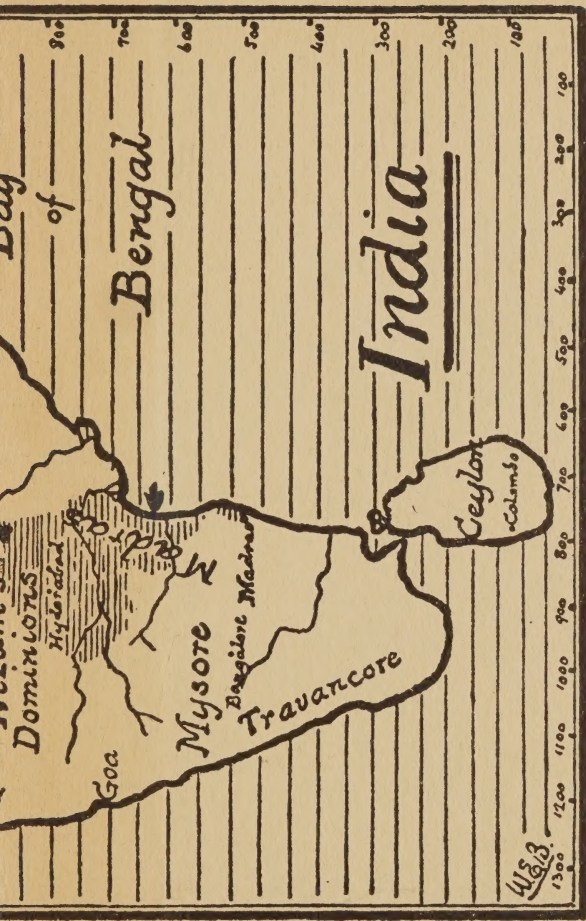
N 26 '40

O 23 '42

MAR 29 '47







Shaded Area — A.B.F. Mission
 x Hanumanakonda.
 ← Ongole

Princeton Theological Seminary Libraries



1 1012 01186 8462